

#### **LETTER OF TRANSMITTAL**

DATE	:	April 14, 202	1								
ТО	:	Remediation Wisconsin De 2300 North M	Ms. Theadora Jorgensen Remediation and Redevelopment Program Wisconsin Department of Natural Resources 2300 North Martin Luther King Drive Milwaukee WI, 53212								
FROM	:	Daniel Pelcza	ar, PG.   Senior Hydrogeologis	st							
SUBJECT	:	Community V 2748 N. 32nd	Site Investigation Work Plan Community Within the Corridor Limited Partnership – East Block 748 N. 32nd Street, Milwaukee, WI 53210 BRRTS #: 02-41-263675; FID #: 241025400								
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We are:											
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1	04	/14/2021	Site Investigation Work Plan w	/ \$700 review fee							
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$\square$ Action			Revision/Resubmittal	☐ Distribution							
Remarks:											
•	•			e any additional information, please feel or telephone at (262) 821-1171 Ext. 112.							

We look forward to working with you on this project.



April 14, 2021

Ms. Theadora Jorgensen Remediation and Redevelopment Program Wisconsin Department of Natural Resources 2300 North Martin Luther King Drive Milwaukee WI, 53212 Project # 40441

**Subject:** Site Investigation Work Plan

Community Within the Corridor Limited Partnership – East Block

2748 N. 32nd Street, Milwaukee, WI 53210 BRRTS #: 02-41-263675; FID #: 241025400

Dear Ms. Jorgensen:

Enclosed, please find a Site Investigation Work Plan which K. Singh & Associates, Inc. has prepared for the referenced project. The assessment will be conducted in accordance with NR 716 of the Wisconsin Administrative Code. A review fee is included in the amount of \$700 with this submittal pursuant with NR 749.

If we can be of further assistance in discussing this report with you, please contact us.

Sincerely,

K. SINGH & ASSOCIATES, INC.

leen Jeboush

Aileen Zebrowski, E.I.T.

Staff Engineer

Daniel K. Pelczar CPG, P.G.

Senior Geologist

Pratap N. Singh, Ph.D., P.E.

Principal Engineer

cc: Mr. Shane LaFave / Roers Companies

Mr. Que El-Amin / Scott Crawford, Inc.

## SITE INVESTIGATION WORK PLAN COMMUNITY WITHIN THE CORRIDOR LIMITED PARTNERSHIP - EAST BLOCK 2748 S. 32ND ST.

MILWAUKEE, WI 53210 BRRTS #: 02-41-263675 FID #: 241025400

APRIL 14, 2021

#### PREPARED BY

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PROJECT #40441



### SITE INVESTIGATION WORK PLAN COMMUNITY WITHIN THE CORRIDOR LIMITED PARTNERSHIP - WEST BLOCK 2748 S. 32ND ST.

#### MILWAUKEE, WI 53210 BRRTS #: 02-41-263675; FID #: 241025400

This report was prepared by: Daniel K. Pelczar, CPG, P.G.

P.G. # 1158 - 013 Senior Geologist Date: July 31, 2022

P.E. # 22177 – 006

Date: July 31, 2022

"I, Daniel K. Pelczar, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, the information contained in this document is correct and the document was prepared in compliance with applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Belight lip

This report was reviewed by: Pratap N. Singh, Ph.D., P.E.

Principal Engineer

"I, Pratap N. Singh, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

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#### SECTION I. INTRODUCTION

#### 1.1 Project Description

The CWC facility is being reported under two individual properties: East Block (2748 N. 32nd Street) and West Block (3212 W. Center Street, 2727 N. 32nd Street, and 2758 N. 33rd Street). This Site Investigation Work Plan (SIWP) pertains to the East Block.

The Community Within the Corridor Limited Partnership is proposing to redevelop the property (both the East and West Blocks) into a mix of affordable housing, commercial spaces, and other amenities. The proposed development includes the following: The Corridor Lofts (64 Units), Creme City Lofts (36 Units) & 30 Square Townhomes (6 Units) and the Briggs Apartment Homes (91 Units) and a Community Service Facility which will include early childhood education, Science, Technology, Engineering, Art & Math after school programming, a health club (Basketball, Volleyball & Futsal, Skatepark), laundromat and a petite grocery store. The property has been rezoned Industrial Mix to facilitate development of the project.

No demolition of existing buildings is planned. The building interiors will be renovated and reconfigured. A ramp will be constructed to utilize the basement as a parking garage. Paved areas will be milled and paved or have pavement removed, be regraded, and then restored with asphalt.

The Community Within the Corridor Limited Partnership has purchased the property located at 2748 N 32nd Street and has initiated detailed planning and engineering for a mixed residential, retail, and commercial facility, known as the Community Within the Corridor. The existing property and building are a former Briggs and Stratton manufacturing facility. A collection of interconnecting buildings cover the industrial property covering over 300,000 square feet. A site location map of the project area is depicted as Figure 1.

The property is in the Southwest ¼, of the Northeast ¼, of Section 13, Township 7 North, Range 21 East. The overall topography of the site area slopes to the west and the southwest towards 32nd Street and West Center Street, respectively. Elevation at the project site ranges between 686 and 673 feet mean seal level (MSL). Surface water collects in storm sewers on and surrounding the site and infiltrates the grassy areas in the eastern and southern portions of the site. Groundwater flows to the west-northwest based on historic groundwater monitoring data.

The property has the following WTM Coordinates (approximate center of subject site):

WTMX 686,613 WTMY 290,511

The property is owned by Community Within the Corridor Limited Partnership. KSingh obtained acreage and zoning information from the Milwaukee County Land Information System database available online (1, 2). The parcel totals approximately 4.16 acres and is zoned as IM – Industrial Mixed.

Responsible Party:
Roers Companies LLC
Attn: Mr. Shane LaFave
110 Cheshire Lane, Suite 120
Minnetonka, MN 55305



Office: (763) 285-8795 Cell Phone: (763) 300-1861 <a href="mailto:shane@roerscompanies.com">shane@roerscompanies.com</a>

Project Consultant:
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#### 1.2 Site History

The former Briggs and Stratton Industrial Complex has a long history which was documented in a historic preservation certification application (3). The southern half of the site the buildings date back to as early as 1906 with the northern half of the site buildings being additions in the circa 1920s, 1930s, 1950s and 1960s. The property was first used by Romadka Brothers Co. a manufacture of trunks suitcases and travel bags (1910 Sanborn map). Later the site was identified as Westinghouse Lamp Co. (1910 Sanborn map, updated in 1926) and then Briggs & Stratton (1910 Sanborn map, updated 1961). The Briggs & Stratton Plant was purchased in 1936 with additions circa 1950s and 1960s. The layout of the property is shown on Figure 2. This historical preservation certification application is presented in Attachment A.

KSingh reviewed information on the WDNRs BRRTS website (4) regarding a listing of case files for the subject site, of which there were four that pertain to Facility Identification (FID) No. 241025400.

#### 03-41-000793 Jonas Construction – Closed LUST

This case was opened on June 8, 1990, and was closed on February 14, 2007, with continuing obligations. This case pertains to petroleum and chlorinated solvent contamination associated with leaking underground storage tanks (LUST). There were seven USTs in the northern courtyard that were removed with one being closed-in-place. Historic site figures are presented in Appendix B.

### • <u>02-41-263675 Community Within the Corridor – East Block (Formerly Wisconsin Industries Pension</u> & Trust) - Open ERP

This case was opened on January 11, 2001, and was closed on August 26, 2008, with continuing obligations; however, was reopened on April 6, 2021, due to Community Within the Corridor redevelopment of the East block of which this SIWP is part of. Historic site figures are presented in Appendix C.

#### 04-41-550446 Wisconsin Industries Pension & Trust— Closed SPILL

This case was opened on January 29, 2002, due to vandalism (copper piping removed) which released approximately 2,134-gallons of mineral oil. This spill activity case was closed on January 16, 2003. This area is located in a transformer courtyard on the southeastern portion of the subject site.

02-41-304988 Briggs & Stratton (Former) – Closed ERP



This case was opened on January 29, 2002, due to the vandalism mineral oil spill noted above. Approximately 362 tons of Diesel Range Organics (DRO) impacted soil was excavated and disposed of as special waste at a landfill. Verification soil sampling was performed and met state standards then the excavation was backfilled. This case was closed on January 16, 2003. Historic site figures are presented in Appendix D.

#### KSingh previously prepared the following documents:

- Phase I Environmental Site Assessment, Community Within the Corridor, 2748 N 32nd Street, Milwaukee, Wisconsin prepared by K. Singh & Associates, Inc. dated March 10, 2020 (5);
- Phase II Environmental Site Assessment for Community Within the Corridor, located at 2748 N 32nd Street, 3212 West Center Street, 2727 N 32nd Street, 2758 N 33rd Street, 2784 N 32nd Street, Milwaukee, Milwaukee County, Wisconsin prepared by K. Singh & Associates, Inc., May 24, 2020 (6);
- Indoor Air and Sub-Slab Vapor Sampling, Community Within the Corridor, 2748 N 32<sup>nd</sup> Street, Milwaukee, WI, dated July 7, 2020 (7);
- Request for Post Closure Modification Community Within the Corridor Development (Former Wisconsin Industries Pension Plan & Trust), 2748 N 32nd Street, Milwaukee, WI, dated July 8, 2020 (8);
- Additional Information re: Decommissioning of Current Sub-Slab Depressurization System and Implementation of Parking Garage Ventilation at Community Within the Corridor, Milwaukee, WI, dated September 15, 2020 (9);
- Environmental Investigation Memorandum for Community Within the Corridor, located at 2748 N 32nd Street, 3212 West Center Street, 2727 N 32nd Street, 2758 N 33rd Street, 2784 N 32nd Street, Milwaukee, WI, dated August 24, 2020 (10);
- Sub-Slab Vapor Investigation Work Plan for the Community Within the Corridor, Limited Partnership, located at 2748 N. 32nd Street, 3212 West Center Street, 2727 N. 32nd Street, 2758 N. 33rd Street, and 2784 N. 32nd Street, in Milwaukee, WI, dated November 12, 2020 (11);
- Response to WDNR Review of Sub-Slab Vapor Investigation Work Plan for the Community Within the Corridor, Limited Partnership, located at 2748 N. 32nd Street, 3212 West Center Street, 2727 N. 32nd Street, 2758 N. 33rd Street, and 2784 N. 32nd Street, in Milwaukee, WI, dated December 3, 2020 (12);
- Additional Sub-Slab Vapor Sampling Investigation for Post Closure Modification, Community Within the Corridor Limited Partnership 2748 N 32nd Street, Milwaukee, WI, dated January 8, 2021 (13);
- Update to Post Closure Modification Request / Remedial Action Plan, Community Within the Corridor Development (Former Wisconsin Industries Pension Plan & Trust),2748 N 32nd Street, Milwaukee, WI, dated March 19, 2021 (14); and



 Additional Soils Investigation, Community Within the Corridor Development (East Block), (Former Wisconsin Industries Pension Plan & Trust), 2748 N 32nd Street, Milwaukee, WI, dated March 24, 2021 (15).

The WDNR issued a Responsible Party (RP) letter for the Community Within the Corridor – East Block located at 2748 N. 32nd St., Milwaukee, Wisconsin on April 6, 2021, and assigned the subject site to BRRTS #: 02-41-263675. A copy of the RP letter is provided as Appendix E.

The property was previously investigated and granted Case Closure with continuing obligations as an industrial property under the Wisconsin Department of Natural Resources (WDNR) Bureau of Remediation and Redevelopment (BRRTS) # 02-41-263675.

KSingh was retained to perform environmental consulting services for the redevelopment of the property. Following a Phase I Environmental Site Assessment (ESA), a Phase II ESA, and Sub-Slab Vapor Sampling, a Post-Closure Modification Request was submitted to the WDNR on July 8, 2020. Following submission of the Post-Closure Modification Request, KSingh performed a Sub-Slab Vapor Investigation of the building. Based on the Sub-Slab Vapor Investigation, it was determined that a vapor mitigation system would be required for the facility in addition to construction and maintenance of engineered barriers which was documented in a Remedial Action Plan (RAP) dated March 19, 2021.

KSingh performed a Phase II ESA to identify and provide information regarding potential impacts within the facility from historical land use in April 2020. The locations of soil borings are shown on Figure 2. Soil borings B-7 to B-12 were performed to depths of two to twenty feet (below ground surface) bgs on April 10, 2020, to assess areas of contamination in the East Block. Soil samples were collected and analyzed for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) metals, polychlorinated biphenyls (PCBs), pesticides and herbicides. On, June 25, 2020, a hand auger sample B-16 was performed to a depth of two feet and analyzed for Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS).

Within the soils both petroleum and chlorinated VOCs were detected along with PAHs, PCBs, arsenic and lead above Residual Contaminant Levels (RCLs) for the protection to groundwater and/or non-industrial direct contact exposure pathways. Soils analyzed for PFAS were either below the laboratory's method detection limit or were below the non-industrial direct contact exposure pathway. All other soil samples were below respective groundwater protection RCLs for pesticides and herbicides. Groundwater had detections of petroleum and chlorinated VOC, naphthalene, arsenic, cadmium, chromium and lead above state standards.

Previous soil analytical results collected by KSingh are summarized in Tables 1 and 2. Previous groundwater analytical results collected by KSingh are summarized in Table 3.

#### 1.3 Purpose and Scope

The purposes of this work plan is to complete a Site Investigation (SI) Report in accordance with NR 716 (16) for the subject site. The specific scope and objectives of the SIWP are as follows:

1. Prepare a work plan to characterize the nature, degree, and extent of contamination in soil, and groundwater, in the proximity of the subject site (focusing on the exterior of the buildings footprint);



- 2. Conduct an on-site site investigation;
- 3. Evaluate groundwater quality with respect to the NR 140 Enforcement Standard (ES) and Preventive Action Limit (PAL) in developable groundwater (>0.2 gallons/minute) (17);
- Evaluate soil contamination with respect to NR 720 Residual Contaminant Levels for direct-contact exposure pathway in the upper 4 feet of soil and the protection to groundwater exposure pathway (18);
- 5. Perform two quarterly groundwater sampling events;
- 6. Prepare a SI Report consistent with the requirements of the State of Wisconsin (NR 716).

#### 1.4 Report Organization

This report is organized into four sections. Section I briefly discusses regulatory background, purpose and scope, and report organization. Section II provides a review of the background information and a brief description of characterization activities in the project area. Section III includes the work plan for the site investigation and Section IV includes references. Figures and Tables are included after references.



#### SECTION II. PROJECT CONCEPTUALIZATION

#### 2.1 Conceptual Site Model

Based on the site background, KSingh has developed a conceptual site model for the subject site. Subsurface conditions for the East Block based on the Phase II ESA data (B-7 through B-12 and B-16) consist of native light to dark brown, and brownish gray to grayish brown, silty clays to the maximum depth explored of 20 feet bgs. There were some lenses of brownish gray to dark gray, sand and gravel within the silty clays from one to three feet thick which were moist upon drilling. An exception was at B-8/TW-3, of which a brown, moist, sand layer was present from approximately one to four feet deep. On the East Block weathered dolomite was encountered at approximately 32 feet bgs in one of the historic soil borings.

The overall topography of the site area slopes gradually to the west and southwest. Based on historical groundwater flow maps; flow is towards the west-northwest.

Within the soils both petroleum and chlorinated VOCs were detected along with PAHs, PCBs, arsenic, and lead above RCLs for the protection to groundwater and/or non-industrial direct contact exposure pathways. All other soil samples concentrations were below respective groundwater protection RCLs for pesticides and herbicides. An overview of the interior and exterior soil analytical results are shown on Figures 2 and 3.

Sampling was previously performed for emerging contaminants, perfluoroalkyl and polyfluoroalkyl substances (PFAs), and the results are summarized in Table 2. PFAs were not detected exceeding RCLs. The property was historically used for manufacturing small engines by Briggs and Stratton. No manufacturing of Teflon coated materials was performed on the site and the manufacturing operations are not a known source of PFAs. The property also has no history of using fire suppressant foams. Based upon the soil testing previously performed and the known history of the facility, the property is not a risk for PFAs contamination.

Groundwater had detections of petroleum and chlorinated VOC, naphthalene, arsenic, cadmium, chromium and lead above state standards. Since only one temporary groundwater monitoring well (B-8/TW-3) produced water and was sampled the groundwater risks are currently unknown. Two other temporary groundwater monitoring well on-site were dry.

After the Phase II ESA, further site investigation activities (January through March 2021) were performed to evaluate sub-slab vapor and soil quality conditions within the footprint of the existing buildings. These buildings are currently undergoing remodeling as part of site redevelopment for this project. The vapor intrusion assessment occurred first based on the contractor's schedule and has been documented in the numerous reports listed in Section 1.2. A rather extensive vapor intrusion assessment was performed at the site and these were some of the findings:

- Chlorinated solvents, Cyclohexane, Hexane, and petroleum constituents were detected under the
  existing building at concentrations exceeding Residential Vapor Risk Screening Levels (VRSLs)
  and/or Large Commercial / Industrial Building VRSLs.
- Trichloroethene (TCE) is the most widespread contaminant of concern and is associated with past industrial uses of the facility.
- There is no pattern suggesting that existing underground utilities are acting as preferential migratory pathways.
- Petroleum sub-slab vapors are associated with the existing LUST release.



 Other sub-slab vapor concentrations are associated with the history of industrial operations at the facility.

A RAP was submitted to the WDNR in March 2021, which addresses vapor mitigation for the building complex.

The site and the surrounding area are supplied with drinking water from Lake Michigan via the City of Milwaukee. No drinking water risks exist for the subject site and surrounding properties. There are no private drinking water wells within 1,200 feet of the site which will need to be sampled.

To the best of KSingh's knowledge, there are no sensitive species, habitats or ecosystems, wetlands, resource waters, sites of historical/archaeological significance within 1,200 feet of the site. No further investigations will be necessary for those receptors based on planned construction requirements on the subject site.

No off-site up-gradient properties are present within ¼-mile of the property that have the potential to contribute to contamination of the subject site based on a desk-top review of WDNR case file records website (4).

Regarding emerging contaminants PFAS one sample was collected of soil within an area within the northern courtyard that had high levers of petroleum and chlorinated VOCs. The soil tested for PFAS was either below the laboratory's method detection limit or was below the non-industrial direct contact exposure pathway; therefore, PFAS parameters are not planned on being tested for in either soil or groundwater.

The amount of exterior soil and groundwater contamination is known to a degree; however, an overall groundwater assessment of the East Block has never been performed. As a result of the proposed SI, we anticipate delineating further the extent of soil contamination and to determine if there is a groundwater risk.

#### 2.2 Regulatory Consideration

The WDNR has jurisdiction for the project. Work at the project site is anticipated to be performed on the subject property.

#### 2.3 Additional Data Needs

The magnitude and extent of soil, and groundwater contamination will be determined through the performance of the SI outlined in this work plan. No additional data is needed at this time.



#### SECTION III. SITE INVESTIGATION PLAN

#### 3.1 Introduction

The SIWP plan for the SI is a detailed plan that will be developed and followed throughout the SI process. This will lead to a characterization of the nature, extent and rate of migration of a release of environmental contaminants. This plan will address several components, which are as follows:

- 1. Description of the current situation;
- 2. Development of procedures for characterizing the contaminant source, the environmental setting, assembling available monitoring data, the establishment of monitoring procedures and data collection procedures;
- 3. Identification of potential receptors;
- 4. Health and safety procedures;
- 5. A schedule for specific site assessment activities;
- 6. Quality Assurance / Quality Control (QA/QC) Procedures; and
- 7. Data Management Procedures.

#### 3.2 Description of Current Situation and Rationale for Additional Data Needs

The existing information is not sufficient to determine the horizontal and vertical extent of soil and groundwater contamination on the site. The performance of soil probes and groundwater monitoring well installation are proposed to determine the impacts of soil and groundwater contamination on the subject site.

This program is designed to fill the existing data gaps. Using data compiled during this assessment, the need for actions required for managing and mitigating environmental contamination encountered during construction in soil and groundwater will be determined.

To date there has been a very extensive interior sub-slab vapor and soils investigation due to the construction schedule and limited interior sampling is planned. The focus of this SIWP is on the exterior regarding soil and more specifically groundwater concerns.

#### 3.3 Proposed Approach

Based on a review of the background information and the rationale for additional data needs for determining the nature of the contamination, a program of soil probes and monitoring well installations are proposed. The program is described briefly in subsequent subsections.

#### 3.3.1 Performance of Soil Borings

An exterior program, consisting of performing five soil borings (EB-B-17/MW-1 through EB-B-21/MW-6) to 30 feet bgs, and five soil probes (EB-B-22 through EB-B-26) to 10 feet, for determining the impact of contamination on the subsurface is proposed. All sampling will be performed on unsaturated samples. The locations of the proposed soil probes and monitoring wells are shown on Figure 4. The actual locations of the soil probes and groundwater monitoring wells may need to be modified in the field based on accessibility, the presence of utilities and construction activities ongoing at the site. Soil probes will be conducted utilizing a conventional soil probing methods.



The soil probing proposed for the investigation should be sufficient to delineate the extent of contamination on the subject site. Off-site soil borings may be necessary if contamination is not delineated by the proposed on site soil borings. Boreholes that are not converted into monitoring wells will be abandoned in accordance with NR 141 and patched with asphalt following completion. Soil cuttings will be drummed until proper disposal can be arranged. The selected driller will be responsible for their equipment decontamination following company policies.

#### 3.3.2 Installation of Monitoring Wells

Six soil borings will be converted into monitoring wells as shown on Figure 4. Limited groundwater quality data exists for the East Block property. Three previous temporary wells were installed during the Phase II ESA with only one producing a water to sample and the other two were dry. There were also groundwater monitoring wells installed for the Jonas Construction closed LUST case (BRRTS #: 03-41-000793); however, these wells have since been abandoned. The proposed well screen depths are estimated to be between 8 to 23 feet bgs with planned 15-foot screens.

In addition, the proposed wells for the West Block (BRRTS #: 03-41-587376) will be sampled congruently so that the East Block SI will have down-gradient coverage (see Figure 4).

Soil probing will be used to log and collect soil samples then HSA drilling methods will be used utilizing a soil probe rig due to the accessibility of site conditions that are under construction. Conventional groundwater monitoring wells will be constructed in accordance with NR 141 (19). The 2-inch diameter monitoring wells will be developed in accordance with NR 141. The selected driller will be responsible for their equipment decontamination following company policies.

#### 3.3.3 Installation of Sub-slab Vapor Probes and Utility Vapor Survey

The following documents have been produced by KSingh regarding interior sub-slab vapor sampling:

- Sub-Slab Vapor Investigation Work Plan for the Community Within the Corridor, Limited Partnership, located at 2748 N. 32nd Street, 3212 West Center Street, 2727 N. 32nd Street, 2758 N. 33rd Street, and 2784 N. 32nd Street, in Milwaukee, WI, dated November 12, 2020;
- Response to WDNR Review of Sub-Slab Vapor Investigation Work Plan for the Community Within the Corridor, Limited Partnership, located at 2748 N. 32nd Street, 3212 West Center Street, 2727 N. 32nd Street, 2758 N. 33rd Street, and 2784 N. 32nd Street, in Milwaukee, WI, dated December 3, 2020;
- Additional Sub-Slab Vapor Sampling Investigation for Post Closure Modification, Community Within the Corridor Limited Partnership 2748 N 32nd Street, Milwaukee, WI, dated January 8, 2021; and
- Update to Post Closure Modification Request / Remedial Action Plan, Community Within the Corridor Development (Former Wisconsin Industries Pension Plan & Trust),2748 N 32nd Street, Milwaukee, WI, dated March 19, 2021.



A utility vapor survey is planned which will be subjected to qualitative screening in the field for volatile organic compounds using a photoionization detector (PID). This will include curb and catch basins and manholes within N. 32<sup>nd</sup> St. and N. Center St. Due to traffic conditions summa canisters will not be collected of these locations.

The grounds and buildings will be checked for existing manholes and sewer cleanouts and field screened utilizing a PID. If PID readings are 10 instrument units or higher a vapor sample will be collected and sampled for VOC using in accordance with EPA Method TO-15.

#### 3.4 Engineering Survey

A map of the project area will be prepared including soil probes and monitoring wells as a part of the proposed investigation. Surface elevations and State Plane Coordinates will be determined for each soil probe and monitoring wells.

#### 3.5 Regional Geology and Hydrogeology

Published and other existing materials about the regional geologic conditions, groundwater occurrences and behavior will be reviewed. This data will provide a framework for the understanding of the site that can be used as an aid in interpreting site-specific data. Specific questions, such as the occurrence of a near-surface aquifer, regional groundwater flow directions, the effect of surface water on groundwater conditions in the near-surface aquifer, and regional groundwater quality, especially as it pertains to the near-surface aquifer, will be investigated.

#### 3.5.1 Site Geology and Hydrogeology

Some site-specific geologic data are available for the subject site. Proposed soil probes and the monitoring well data will provide additional information about the nature, permeability, and on-site transport of contaminants into the subsurface environment.

#### 3.6 Soil Testing

The drilling method utilized will be a dry process, geoprobe type, which advances a 2-inch diameter steel tube containing a plastic four-foot sampling tube. The sampling is continuous, with the sampling tube being hydraulically pushed deeper into the substrata four feet per sample, in accordance with ASTM D 1587-15. The plastic sampling tube will be replaced for each sampling interval which will prevent cross-contamination.

Soil samples will be subjected to qualitative screening in the field for volatile organic compounds using a photoionization detector (PID). Soil samples for laboratory analysis will be selected based on PID readings and/or field observation. It is planned that two "grab" soil samples per soil probe will be collected for laboratory testing unless noted below. The estimated depths of the collection will be from 1 to 4 feet bgs (shallow) and just above the water table (deeper) to define the unsaturated vertical extent of the contamination. Soil samples will be preserved in the field and put on ice, transported to a certified laboratory using chain-of-custody procedures, and tested for the following parameters:

VOCs in accordance with EPA Method 8260B (both shallow and deeper samples).



- PAHs in accordance with EPA Method 8270D (both shallow and deeper samples).
- SVOCs in accordance with EPA Method 8270D (shallow soil samples only adjacent to railroad tracks).
- PCBs in accordance with EPA Method 8082A (shallow soil samples only adjacent to railroad tracks).
- Oranochlorine Pesticides in accordance with EPA Method 8081A (shallow soil samples only adjacent to railroad tracks).
- Herbicides in accordance with EPA Method 8151A (shallow soil samples only adjacent to railroad tracks).

The selected laboratory will perform QA/QC procedures in accordance with the company policies.

#### 3.7 Groundwater Monitoring

Four (2) quarterly groundwater monitoring sampling events are proposed. Depth to groundwater in each of the monitoring wells will be measured before sampling, purge volumes will be calculated in accordance with WDNR's Groundwater Sampling Field Manual (20), and sampling will be performed after purging is complete. Groundwater samples will be preserved in the field and put on ice, transported to a certified laboratory using chain-of-custody procedures, and tested for the following parameters:

- VOCs in accordance with EPA Method 8260B.
- PAHs in accordance with EPA Method 8271D.
- SVOCs in accordance with EPA Method 8270D (adjacent to railroad tracks).

The selected laboratory will perform QA/QC procedures in accordance with the company policies. In addition, hydraulic conductivity testing will be performed as part of the NR 716 process.

#### 3.8 Sub-slab Vapor Testing

Please refer to Section 3.3.3.

#### 3.9 Health and Safety Plan

Protecting the health and safety of the investigative team, as well as the general public, is a major concern during the field investigation. This is particularly important in cases where workers may be exposed to known or unknown chemicals, heat stress, physical stress, slips/trips/falls, biologic agents, equipment-related injuries, fire and explosion. Many of these hazards are encountered in any type of field study, but exposure to chemical hazards, including toxicity, is a major concern for the investigative team that needs to be addressed.

Chemical hazards in soil and groundwater associated with the historical use of the site are of principal concern. Particulate emissions in the air may also be a concern. A PID will be used to monitor the quality of air at the project site. Because the investigation will not be conducted in a confined space, special precautions may not be required. However, Level D protection will be required for the staff actively involved in the implementation of the field work.

Level D protection is primarily a work uniform. Level D personal protective equipment includes:



- 1. Coveralls:
- 2. Reflective safety vest;
- 3. Gloves;
- 4. Boots/shoes, chemical-resistant steel toe and shank:
- 5. Safety glasses or chemical splash goggles; and
- 6. Hard hat.

The field investigation team will be required to take precautions at Level D. A higher level of protection may be required if data gathered during the field investigation indicates high concentrations of VOCs in ambient air using a PID.

Field staff shall utilize disposable supplies to prevent cross-contamination between samples.

#### 3.10 Permits and Investigation Derived Waste

While the SI is underway, permits for the temporary storage of soil and contaminated groundwater and a conceptual plan for treatment or off-site disposal will be initiated, if necessary. The final permitting requirements will depend on source identification and selected corrective action technology. Permits will not be needed to perform soil borings and monitoring wells on the site. If feasible, groundwater purge water will be disposed of to combined sewers via an MMSD Notice of Intent.

#### 3.11 Project Schedule

The schedule for site assessment activities is based on favorable weather conditions and obtaining approvals in a timely manner. The following schedule is proposed to expedite the completion of SI Report.

•	Start monitoring well installations and soil probes;	April 19, 2021
•	Perform survey of new borings, monitoring wells;	April 28, 2021
•	Develop and sample groundwater monitoring wells (first round);	May 3, 2021
•	Sample groundwater monitoring wells (second round);	August 2, 2021
•	Sample groundwater monitoring wells (third round);	November 3, 2021
•	Sample groundwater monitoring wells (fourth round);	February 2, 2022
•	Submit SI Report.	February 25, 2022



#### **SECTION IV. REFERENCES**

- 1. Web Page: https://lio.milwaukeecountywi.gov/Html5Viewer/index.html?viewer=MCLIO-Map
- 2. Web Page: https://city.milwaukee.gov/DCD/Planning/PlanningAdministration/ZoningMap
- 3. Briggs and Stratton Industrial Campus, Historic Preservation Certification Application Part 1 Evaluation of Significance, (given to KSingh by Roers Companies), no date included.
- 4. Web Page: https://dnr.wisconsin.gov/topic/Brownfields/botw.html
- 5. Phase I Environmental Site Assessment, Community Within the Corridor, 2748 N 32nd Street, Milwaukee, Wisconsin prepared by K. Singh & Associates, Inc. dated March 10, 2020.
- Phase II Environmental Site Assessment (ESA) Phase II Environmental Site Assessment Report for Community Within the Corridor, located at 2748 N 32nd Street, 3212 West Center Street, 2727 N 32nd Street, 2758 N 33rd Street, 2784 N 32nd Street, Milwaukee, Milwaukee County, Wisconsin prepared by K. Singh & Associates, Inc., May 24, 2020.
- 7. Indoor Air and Sub-Slab Vapor Sampling, Community Within the Corridor, 2748 N 32<sup>nd</sup> Street, Milwaukee, WI, dated July 7, 2020.
- 8. Request for Post Closure Modification Community Within the Corridor Development (Former Wisconsin Industries Pension Plan & Trust), 2748 N 32nd Street, Milwaukee, WI, dated July 8, 2020.
- 9. Additional Information re: Decommissioning of Current Sub-Slab Depressurization System and Implementation of Parking Garage Ventilation at Community Within the Corridor, Milwaukee, WI, dated September 15, 2020.
- Environmental Investigation Memorandum for Community Within the Corridor, Located at 2748 N 32nd Street, 3212 West Center Street, 2727 N 32nd Street, 2758 N 33rd Street, 2784 N 32nd Street, Milwaukee, WI, dated August 24, 2020.
- 11. Sub-Slab Vapor Investigation Work Plan for the Community Within the Corridor, Limited Partnership, located at 2748 N. 32nd Street, 3212 West Center Street, 2727 N. 32nd Street, 2758 N. 33rd Street, and 2784 N. 32nd Street, in Milwaukee, WI, dated November 12, 2020.
- 12. Response to WDNR Review of Sub-Slab Vapor Investigation Work Plan for the Community Within the Corridor, Limited Partnership, located at 2748 N. 32nd Street, 3212 West Center Street, 2727 N. 32nd Street, 2758 N. 33rd Street, and 2784 N. 32nd Street, in Milwaukee, WI, dated December 3, 2020.
- 13. Additional Sub-Slab Vapor Sampling Investigation for Post Closure Modification, Community Within the Corridor Limited Partnership 2748 N 32nd Street, Milwaukee, WI, dated January 8, 2021.



- Update to Post Closure Modification Request / Remedial Action Plan, Community Within the Corridor Development (Former Wisconsin Industries Pension Plan & Trust),2748 N 32nd Street, Milwaukee, WI, dated March 19, 2021.
- 15. Additional Soils Investigation, Community Within the Corridor Development (East Block), (Former Wisconsin Industries Pension Plan & Trust), 2748 N 32nd Street, Milwaukee, WI, dated March 24, 2021.
- 16. Wisconsin Administrative Code Chapter NR 716 Site Investigations, published November 2013.
- 17. Wisconsin Administrative Code Chapter NR 140 Groundwater Quality, published August 2015.
- 18. Wisconsin Administrative Code Chapter NR 720 Soil Cleanup Standards, published November 2013.
- 19. Wisconsin Administrative Code Chapter NR 141 Groundwater Monitoring Well Requirements, published June 2015.
- 20. WDNR, Groundwater Sampling Field Manual, PUBL-DG-038 96, September 1996.



### **FIGURES**



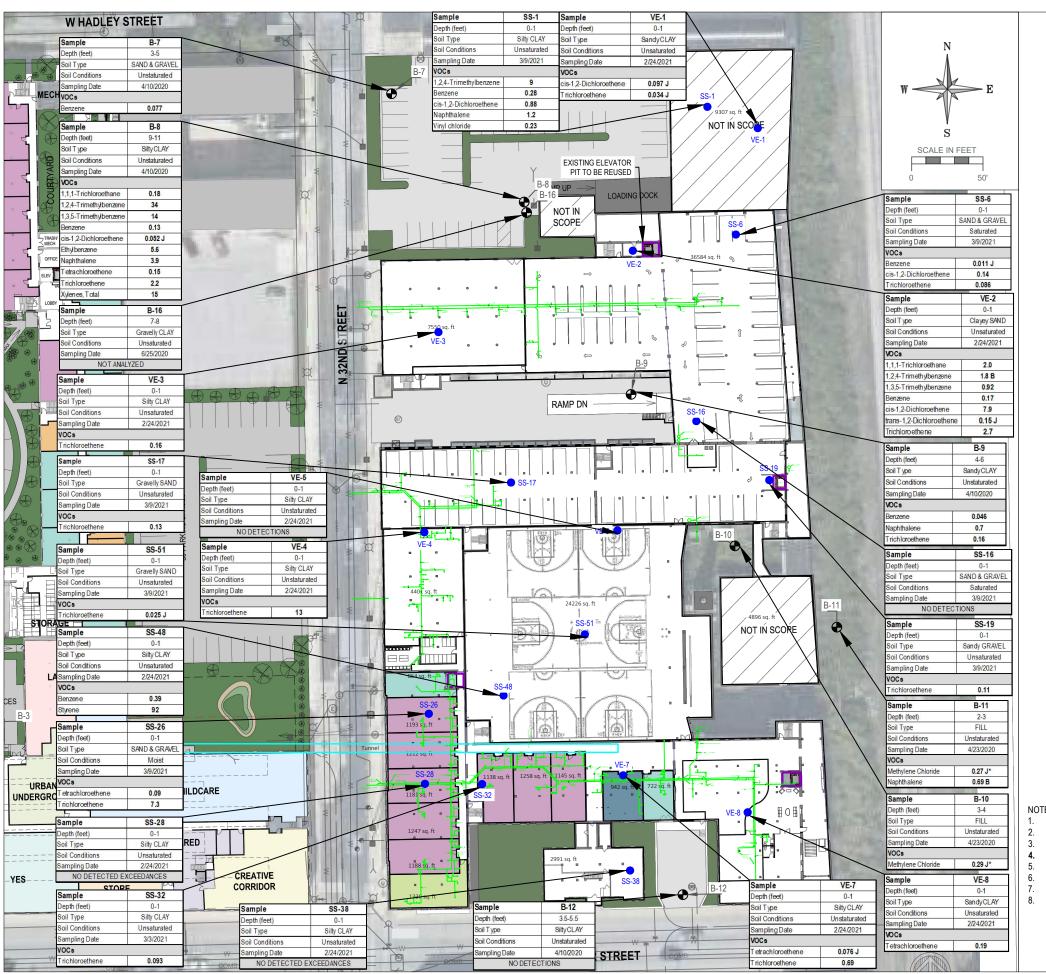


Figure 1 – Site Location Map

from 2018 Milwaukee Quadrangle, Wisconsin – Milwaukee County 7.5-minute series

Scale 1:24,000





LEGEND

SS and VE Soil Sampling Locations

Previous Soil Boring Locations

Known Elevator Shaft

1 - Bedroom Apartment

2 - Bedroom Apartment

3 - Bedroom Apartment

4 - Bedroom Apartment

Studio Apartment

Underground Plumbing Underground Tunnel

COMBINATION OF EXISTING AND PROPOSED PLUMBING

		NR 720 RCLs -	NR 720 RCLs -
	NR 720	Non-Industrial	Industrial Use
Analyte	RCLs for GW	Use for Direct	for Direct
	Protection (1)	Contact	Contact
		Protection (1)	Protection (1)
Volatile Organic Compo	ounds (VOCs	)	
1,1,1-Trichloroethane	0.1402	640	640
1,2,4-Trimethylbenzene	1.3787**	219	219
1,3,5-Trimethylbenzene	1.3787**	182	182
Benzene	0.0051	1.6	7.07
cis-1,2-Dichloroethene	0.0412	156	2,340
Ethylbenzene	1.57	8.02	35.4
Methylene Chloride	0.0026	61.8	1,150
Naphthalene	0.658182	5.52	24.10
Styrene	0.22	867	867
Tetrachloroethene	0.0045	33	145
trans-1,2-Dichloroethene	0.0626	1560	1850
Trichloroe the ne	0.0036	1.3	8.41
Vinyl chloride	0.0001	0.067	2.08
Xvlenes, Total	3.96	1.212	1212

- (1) FROM WDNR RCLS WORKSHEET DATED DECEMBER 2018
- REPORTED UNITS IN MG/KG
- ONLY EXCEEDANCES SHOWN
- **BOLD** = VALUE EXCEEDS GROUNDWATER PROTECTION OR DIRECT CONTACT RCLS
- \*\* = COMBINED ESTABLISHED STANDARD OF 1,2,4- & 1,3,5- TRIMETHYLBENZENE
- \* = LABORATORY CONTROL SAMPLE OR ITS DUPLICATE IS OUTSIDE ACCEPTANCE LIMITS
- "J" = ANALYTE DETECTED BETWEEN 'LIMIT OF DETECTION' AND 'LIMIT OF QUANTITATION'
- SAMPLING LOCATIONS ARE APPROXIMATE

3636 North 124th Street Wauwatosa, WI 53222 262-821-1171

CONSULTANT

CORRIDOR

**PROJECT** 

COMMUNITY WITHIN THE CORRIDOR LIMITED PARTNERSHIP

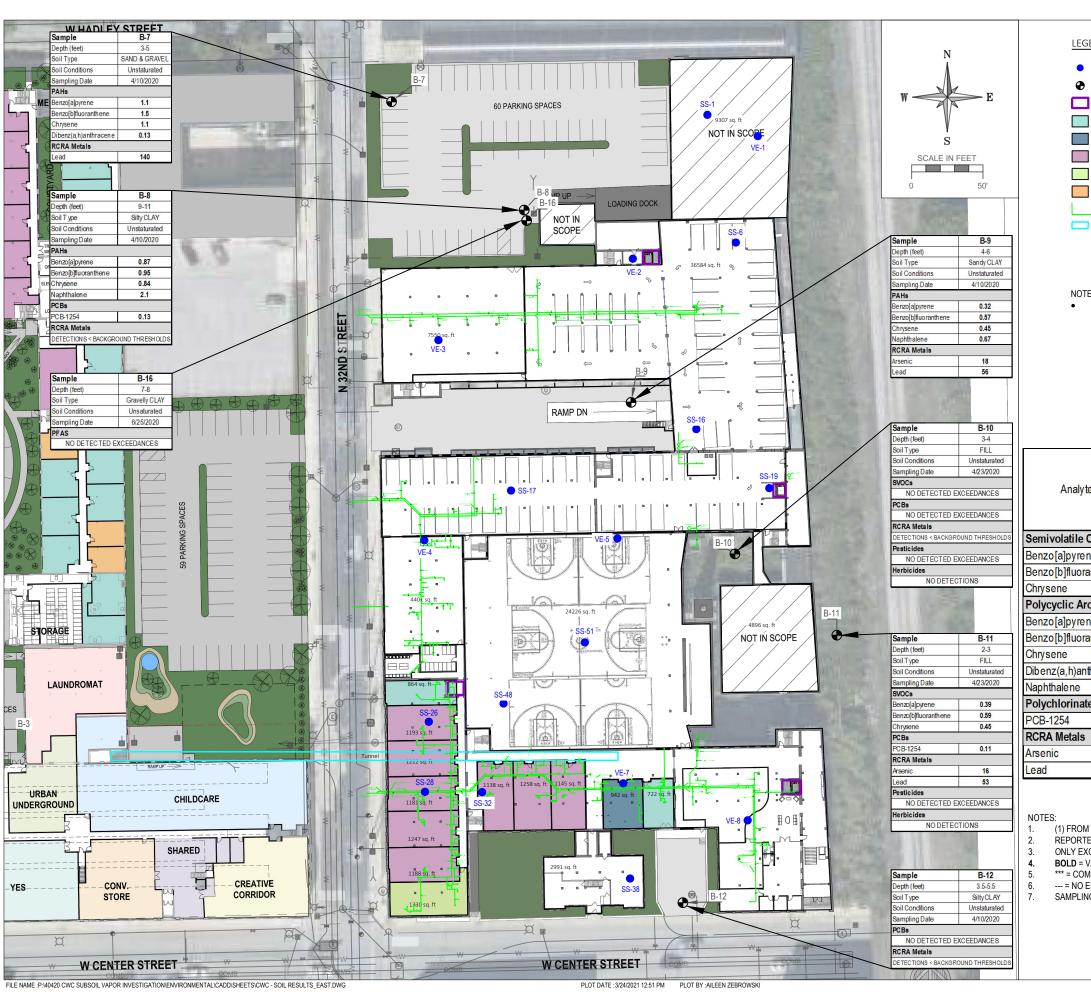
:: COMMUNITY WITHIN THE C 2748 N 32ND STREET MILWAUKEE, WI 53210 PROJECT NUMBER: 40441

CLIENT:

AWN BY IZ	DATE 03/24/2021
ECKED BY R	DATE 03/24/2021

SOIL ANALYTICAL RESULTS FOR VOCS

FIGURE 2



LEGEND

SS and VE Soil Sampling Locations

Previous Soil Boring Locations

Known Elevator Shaft

1 - Bedroom Apartment

2 - Bedroom Apartment

3 - Bedroom Apartment

4 - Bedroom Apartment

Studio Apartment

Underground Plumbing

Underground Tunnel

COMBINATION OF EXISTING AND PROPOSED PLUMBING

		NR 720 RCLs -	NR 720 RCLs -	
	NR 720 RCLs	Non-Industrial	Industrial Use	Background
Analyte	for GW	Use for Direct	for Direct	Threshold
	Protection (1)	Contact	Contact	Value
		Protection (1)	Protection (1)	
Semivolatile Organic (	Compounds (S	VOCs)		
Benzo[a]pyrene	0.47	0.115	2.11	-
Benzo[b]fluoranthene	0.4781	1.15	21.1	-
Chrysene	0.1442	115	2110	-
Polycyclic Aromatic H	ydrocarbons (	PAHs)		
Benzo[a]pyrene	0.47	0.115	2.11	-
Benzo[b]fluoranthene	0.4781	1.15	21.1	
Chrysene	0.1442	115	2110	
Dibenz(a,h)anthracene	U	0.115	2	_
Naphthalene	0.6582	5.52	24.1	-
Polychlorinated Biphe	nyls (PCBs)			
PCB-1254	0.0094***	0.239	1	-
RCRA Metals				
Arsenic	0.584	0.677	3	8.3
Lead	27	400	800	51.6

- (1) FROM WDNR RCLS WORKSHEET DATED DECEMBER 2018
- REPORTED UNITS IN MG/KG
- ONLY EXCEEDANCES SHOWN
- **BOLD** = VALUE EXCEEDS GROUNDWATER PROTECTION OR DIRECT CONTACT RCLS
- \*\*\* = COMBINED ESTABLISHED STANDARD FOR PCBS
- --- = NO ESTABLISHED STANDARD
- SAMPLING LOCATIONS ARE APPROXIMATE

3636 North 124th Street Wauwatosa, WI 53222 262-821-1171

CONSULTANT

CONSULTANT

COMMUNITY WITHIN THE CORRIDOR LIMITED PARTNERSHIP E: COMMUNITY WITHIN THE CORRIDOR 2748 N 32ND STREET MILWAUKEE, WI 53210 PROJECT NUMBER: 40441

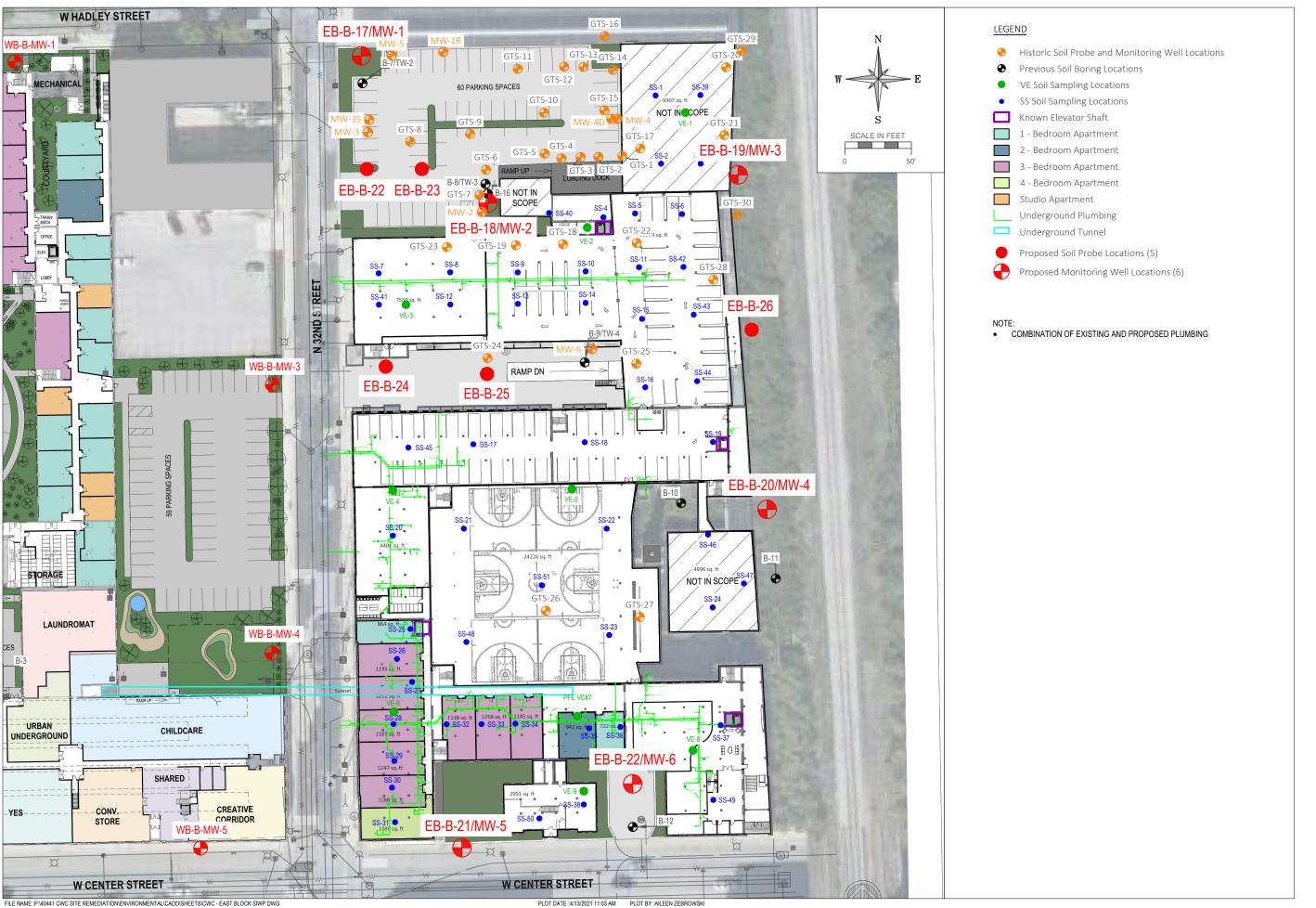
CLIENT:

03/24/2021 DATE 03/24/2021

ADDITIONAL SOIL ANALYTICAL RESULTS

FIGURE 3

SHEET 3



KSingh Engineers Scientists Consultar

3636 North 124th Street Wauwatosa, WI 53222 262-821-1171

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TIANT ILIZINO

CONSULTANT

E: COMMUNITY WITHIN THE CORRIDOR
2748 N 32ND STREET
MILWAUKEE, WI 53210
PROJECT NUMBER: 40441
COMMUNITY WITHIN THE CORRIDOR LIMITED
PARTNERSHIP

CLIENT:

AWN BY DATE

Z 04/12/2021

ECKED BY DATE

PROPOSED SOIL PROBE AND MONITORING WELL LOCATIONS

FIGURE 4

SHEET 4 of SH

### **TABLES**



Sample							B-7	B-8	B-9	B-10	B-11	B-12
Depth (feet)	Units		NR 720 RCLs for GW		NR 720 RCLs -	Background		9-11	4-6	3-4	2-3	3.5-5.5
Soil Type		Method			Industrial Use for	Threshold	SAND & GRAVEL	Silty CLAY	Sandy CLAY	FILL	FILL	Silty CLAY
Soil Conditions	1		Protection (1)	for Direct Contact Protection (1)	Direct Contact Protection (1)	Value	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated
Sampling Date			,	1 Totodion (1)	1 1010011011 (1)		4/10/2020	4/10/2020	4/10/2020	4/23/2020	4/23/2020	4/10/2020
Physical Characteristics												
Percent Moisture	%						15.8	10.5	13	7.6	6.6	9.2
Percent Solids	%						84.2	89.5	87	92.4	93.4	90.8
Volatile Organic Compounds (VO	OCs)											
1,1,1,2-Tetrachloroethane	mg/Kg	8260B	0.0534	2.78	12.3		<0.047	<0.041	<0.051	<0.045	<0.044	<0.041
1,1,1-Trichloroethane	mg/Kg	8260B	0.1402	640	640		<0.039	0.18	0.077 J	<0.037	<0.037	<0.034
1,1,2,2-Tetrachloroethane	mg/Kg	8260B	0.0002	0.81	3.6		<0.041	<0.035	<0.044	<0.039	<0.038	<0.035
1,1,2-Trichloroethane	mg/Kg	8260B	0.0032	1.59	7.01		<0.036	<0.031	< 0.039	<0.035	<0.034	<0.031
1,1-Dichloroethane	mg/Kg	8260B	0.4834	5.06	22.2		<0.042	<0.036	<0.045	<0.040	<0.039	<0.036
1,1-Dichloroethene	mg/Kg	8260B	0.005	320	1,190		<0.040	<0.034	<0.043	<0.038	<0.038	<0.034
1,1-Dichloropropene	mg/Kg	8260B					<0.031	<0.026	<0.033	<0.029	<0.029	<0.026
1,2,3-Trichlorobenzene	mg/Kg	8260B		62.6	934		<0.047	<0.040	<0.050	<0.045	<0.044	<0.040
1,2,3-Trichloropropane	mg/Kg	8260B	0.0519	0.005	0.109		<0.042	<0.036	<0.046	<0.041	<0.040	<0.037
1,2,4-Trichlorobenzene	mg/Kg	8260B	0.408	24	113		<0.035	<0.030	<0.038	<0.034	< 0.033	<0.030
1,2,4-Trimethylbenzene	mg/Kg	8260B	1.3787**	219	219		0.11	34	0.35	< 0.035	0.28	<0.032
1,2-Dibromo-3-Chloropropane	mg/Kg	8260B	0.0002	0.008	0.092		<0.20 *	<0.17 *	<0.22 *	<0.20 *	<0.19	<0.18 *
1,2-Dibromoethane	mg/Kg	8260B	0.0000282	0.05	0.221		<0.040	<0.034	<0.042	<0.038	<0.037	<0.034
1,2-Dichlorobenzene	mg/Kg	8260B	1.168	376	376		<0.034	<0.029	<0.037	<0.033	<0.032	<0.030
1,2-Dichloroethane	mg/Kg	8260B	0.0028	0.652	2.87		<0.040	<0.034	<0.043	<0.038	<0.038	<0.035
1,2-Dichloropropane	mg/Kg	8260B	0.0033	3.4	15		<0.044	<0.038	<0.047	<0.042	<0.041	<0.038
1,3,5-Trimethylbenzene	mg/Kg	8260B	1.3787**	182	182		< 0.039	14	0.080 J	<0.037	0.11	<0.034
1,3-Dichlorobenzene	mg/Kg	8260B	1.1528	297	297		<0.041	<0.035	<0.044	<0.039	<0.038	<0.035
1,3-Dichloropropane	mg/Kg	8260B	0.0003	2.37	10.6		< 0.037	<0.032	<0.040	<0.035	<0.035	<0.032
1,4-Dichlorobenzene	mg/Kg	8260B	0.144	3.74	16.4		< 0.037	<0.032	<0.040	<0.036	<0.035	<0.032
2,2-Dichloropropane	mg/Kg	8260B		191	191		<0.045	<0.039	<0.049	<0.044	<0.043	<0.039
2-Chlorotoluene	mg/Kg	8260B		907	907		< 0.032	<0.028	<0.035	<0.031	<0.030	<0.028
4-Chlorotoluene	mg/Kg	8260B		253	253		<0.036	<0.031	<0.039	<0.034	<0.034	<0.031
Benzene	mg/Kg	8260B	0.0051	1.6	7.07		0.077	0.13	0.046	<0.014	0.055	<0.013
Bromobenzene	mg/Kg	8260B		342	679		<0.036	<0.031	<0.039	<0.035	<0.034	<0.031
Bromochloromethane	mg/Kg	8260B		216	906		<0.044	<0.038	<0.047	<0.042 *	<0.041 *	<0.038
Bromodichloromethane	mg/Kg	8260B	0.0003	0.418	1.83		<0.038	< 0.033	<0.041	<0.036	<0.036	<0.033
Bromoform	mg/Kg	8260B	0.0023	25.4	113		<0.050	<0.043	<0.053	<0.047	<0.047	<0.043
Bromomethane	mg/Kg	8260B	0.0051	9.6	43		<0.081 *	<0.070 *	<0.088 *	<0.078 *	<0.077 *F1	<0.070 *
Carbon tetrachloride	mg/Kg	8260B	0.0039	0.916	4.03		<0.039	<0.034	<0.042	<0.038	<0.037	<0.034
Chlorobenzene	mg/Kg	8260B		370	761		<0.040	<0.034	<0.042	<0.038	<0.037	<0.034



Sample							B-7	B-8	B-9	B-10	B-11	B-12
Depth (feet)	1		NR 720 RCLs	NR 720 RCLs -	NR 720 RCLs -	Background	3-5	9-11	4-6	3-4	2-3	3.5-5.5
Soil Type	Units	Method	for GW	Non-Industrial Use for Direct Contact Protection (1)	Industrial Use for	Threshold	SAND & GRAVEL	Silty CLAY	Sandy CLAY	FILL	FILL	Silty CLAY
Soil Conditions	1		Protection (1)		Direct Contact Protection (1)	Value	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated
Sampling Date			, ,	1 1010011011 (1)	1 1010011011 (1)		4/10/2020	4/10/2020	4/10/2020	4/23/2020	4/23/2020	4/10/2020
Chloroethane	mg/Kg	8260B	0.2266	2,120	2,120		<0.052	<0.044	<0.055	<0.049 *	<0.048 *	<0.045
Chloroform	mg/Kg	8260B	0.0033	0.454	1.98		<0.038	<0.032	<0.041	<0.036	<0.036	<0.033
Chloromethane	mg/Kg	8260B	0.0155	159	669		<0.033	<0.028	<0.035	<0.031	<0.031	<0.028
cis-1,2-Dichloroethene	mg/Kg	8260B	0.0412	156	2,340		<0.042	0.052 J	<0.045	<0.040	<0.039	<0.036
cis-1,3-Dichloropropene	mg/Kg	8260B	0.0003	1,210	1,210		<0.043	<0.037	<0.046	<0.041	<0.040	<0.037
Dibromochloromethane	mg/Kg	8260B	0.032	8.28	38.9		<0.050	<0.043	<0.054	<0.048	<0.047	<0.043
Dibromomethane	mg/Kg	8260B		34	143		<0.028	<0.024	<0.030	<0.026 *	<0.026 *	<0.024
Dichlorodifluoromethane	mg/Kg	8260B	3.0863	126	530		<0.069	<0.059	<0.074	<0.066	<0.065	<0.060
Ethylbenzene	mg/Kg	8260B	1.57	8.02	35.4		0.051	5.6	0.13	<0.018	0.08	<0.016
Hexachlorobutadiene	mg/Kg	8260B		1.63	7.19		<0.046	<0.039	<0.049	<0.044	<0.043	<0.039
Isopropyl ether	mg/Kg	8260B		2,260	2,260		<0.028	<0.024	<0.030	<0.027	<0.027	<0.024
Isopropylbenzene	mg/Kg	8260B		268	268		<0.039	1.8	0.11	<0.038	<0.037	<0.034
Methyl tert-butyl ether	mg/Kg	8260B	0.027	63.8	282		<0.040	<0.035	<0.043	<0.039 *	<0.038 *	<0.035
Methylene Chloride	mg/Kg	8260B	0.0026	61.8	1,150		<0.17	<0.14	<0.18	0.29 J*	0.27 J*	<0.14
Naphthalene	mg/Kg	8260B	0.658182	5.52	24.10		0.15	3.9	0.7	<0.033	0.69 B	<0.030
n-Butylbenzene	mg/Kg	8260B		108	108		<0.040	10	0.059 J	<0.038	<0.037	<0.034
N-Propylbenzene	mg/Kg	8260B		264	264		<0.042	4.2	0.13	<0.041	0.048 J	<0.037
p-Isopropyltoluene	mg/Kg	8260B		162	162		< 0.037	5.1	<0.040	<0.035	<0.035	<0.032
sec-Butylbenzene	mg/Kg	8260B		145	145		<0.041	3.8	0.045 J	<0.039	<0.038	<0.035
Styrene	mg/Kg	8260B	0.22	867	867		<0.040	<0.034	<0.042	<0.038	<0.037	<0.034
tert-Butylbenzene	mg/Kg	8260B		183	183		<0.041	0.38	<0.044	<0.039	<0.038	<0.035
Tetrachloroethene	mg/Kg	8260B	0.0045	33	145		<0.038	0.15	<0.041	<0.036	<0.036	<0.033
Toluene	mg/Kg	8260B	1.1072	818	818		0.28	0.23	0.29	<0.014	0.38	<0.013
trans-1,2-Dichloroethene	mg/Kg	8260B	0.0626	1560	1850		<0.036	<0.031	< 0.039	<0.034	<0.034	<0.031
trans-1,3-Dichloropropene	mg/Kg	8260B		1,510	1,510		< 0.037	<0.032	<0.040	<0.035	<0.035	<0.032
Trichloroethene	mg/Kg	8260B	0.0036	1.3	8.41		<0.017	2.2	0.16	<0.016	<0.016	<0.014
Trichlorofluoromethane	mg/Kg	8260B		1,230	1,230		<0.044	<0.038	<0.047	<0.042	<0.041	<0.038
Vinyl chloride	mg/Kg	8260B	0.0001	0.067	2.08		<0.027	<0.023	<0.029	<0.026	<0.025	<0.023
Xylenes, Total	mg/Kg	8260B	3.96	1,212	1212		0.37	15	1	<0.022	0.81	<0.019
Semivolatile Organic Compounds (SVOCs)												
1,2,4-Trichlorobenzene	mg/Kg	8270D	0.408	24	113					<0.038	<0.038	
1,2-Dichlorobenzene	mg/Kg	8270D	1.168	376	376					<0.042	<0.042	
1,3-Dichlorobenzene	mg/Kg	8270D	1.1528	297	297					<0.040	<0.040	
1,4-Dichlorobenzene	mg/Kg	8270D	0.144	3.74	16.4					<0.045	<0.045	
1-Methylnaphthalene	mg/Kg	8270D		17.6	72.7					<0.0087	0.27	



Sample							B-7	B-8	B-9	B-10	B-11	B-12
Depth (feet)	1		NR 720 RCLs	Non-Industrial Use Ir	NR 720 RCLs -	Background	3-5	9-11	4-6	3-4	2-3	3.5-5.5
Soil Type	Units	Method	for GW		Industrial Use for Direct Contact	Threshold	SAND & GRAVEL	Silty CLAY	Sandy CLAY	FILL	FILL	Silty CLAY
Soil Conditions			Protection (1)	Protection (1)	Protection (1)	Value	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated
Sampling Date				( )	( )		4/10/2020	4/10/2020	4/10/2020	4/23/2020	4/23/2020	4/10/2020
2,2'-oxybis[1-chloropropane]	mg/Kg	8270D								<0.041	<0.041	
2,4,5-Trichlorophenol	mg/Kg	8270D		6320	82,100					<0.081	<0.081	
2,4,6-Trichlorophenol	mg/Kg	8270D		49.3	209					<0.12	<0.12	
2,4-Dichlorophenol	mg/Kg	8270D		190	2460					<0.084	<0.084	
2,4-Dimethylphenol	mg/Kg	8270D		1260	16,400					<0.13	<0.13	
2,4-Dinitrophenol	mg/Kg	8270D		126	1640					<0.62	<0.62	
2,4-Dinitrotoluene	mg/Kg	8270D	0.0001	1.74	7.37					<0.056	<0.056	
2,6-Dinitrotoluene	mg/Kg	8270D	0.0001	0.363	1.54					<0.070	<0.070	
2-Chloronaphthalene	mg/Kg	8270D		4780	60,300					<0.039	<0.039	
2-Chlorophenol	mg/Kg	8270D		391	5,840					<0.061	<0.060	
2-Methylnaphthalene	mg/Kg	8270D		239	3010					<0.0065	0.39	
2-Methylphenol	mg/Kg	8270D		3160	41,000					<0.057	<0.057	
2-Nitroaniline	mg/Kg	8270D		627	8010					<0.048	<0.048	
2-Nitrophenol	mg/Kg	8270D								<0.084	<0.084	
3 & 4 Methylphenol	mg/Kg	8270D		9480**	123,100**					<0.059	<0.059	
3,3'-Dichlorobenzidine	mg/Kg	8270D								<0.050	<0.050	
3-Nitroaniline	mg/Kg	8270D								<0.11	<0.11	
4,6-Dinitro-2-methylphenol	mg/Kg	8270D								<0.28	<0.28	
4-Bromophenyl phenyl ether	mg/Kg	8270D								<0.047	<0.047	
4-Chloro-3-methylphenol	mg/Kg	8270D		6320	82,100					<0.12	<0.12	
4-Chloroaniline	mg/Kg	8270D		2.71	11.5					<0.17	<0.17	
4-Chlorophenyl phenyl ether	mg/Kg	8270D								<0.041	<0.041	
4-Nitroaniline	mg/Kg	8270D		27.1	115					<0.15	<0.15	
4-Nitrophenol	mg/Kg	8270D								<0.34	<0.34	
Acenaphthene	mg/Kg	8270D		3590	45,200					<0.0064	<0.0064	
Acenaphthylene	mg/Kg	8270D								<0.0047	<0.0047	
Anthracene	mg/Kg	8270D	196.9492	17,900	100,000					0.016 J	0.087	
Benzo[a]anthracene	mg/Kg	8270D		1.14	21					0.074	0.36	
Benzo[a]pyrene	mg/Kg	8270D	0.47	0.115	2.11					0.11	0.39	
Benzo[b]fluoranthene	mg/Kg	8270D	0.4781	1.15	21.1					0.16	0.59	
Benzo[g,h,i]perylene	mg/Kg	8270D								0.062	0.18	
Benzo[k]fluoranthene	mg/Kg	8270D		11.5	211					0.05	0.21	
Benzoic acid	mg/Kg	8270D		100,000	100,000					<0.35	<0.35	
Benzyl alcohol	mg/Kg	8270D		6320	82,100					<0.35	<0.35	
Bis(2-chloroethoxy)methane	mg/Kg	8270D		190	2460					<0.036	<0.036	



Sample							B-7	B-8	B-9	B-10	B-11	B-12
Depth (feet)	Units	s Method	NR 720 RCLs for GW Protection (1)	Non-Industrial Use for Direct Contact	NR 720 RCLs - Industrial Use for Direct Contact Protection (1)	Background Threshold Value	3-5	9-11	4-6	3-4	2-3	3.5-5.5
Soil Type							SAND & GRAVEL	Silty CLAY	Sandy CLAY	FILL	FILL	Silty CLAY
Soil Conditions							Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated
Sampling Date	1			( )	( )		4/10/2020	4/10/2020	4/10/2020	4/23/2020	4/23/2020	4/10/2020
Bis(2-chloroethyl)ether	mg/Kg	8270D		0.286	1.29					<0.053	<0.053	
Bis(2-ethylhexyl) phthalate	mg/Kg	8270D	2.88	38.8	164					<0.065	0.24	
Butyl benzyl phthalate	mg/Kg	8270D		286	1210					<0.067	<0.067	
Carbazole	mg/Kg	8270D								<0.089	<0.088	
Chrysene	mg/Kg	8270D	0.1442	115	2110					0.094	0.45	
Dibenz(a,h)anthracene	mg/Kg	8270D		0.115	2					<0.0069	0.055	
Dibenzofuran	mg/Kg	8270D		73	1040					<0.042	0.11 J	
Diethyl phthalate	mg/Kg	8270D		50,600	100,000					<0.060	<0.060	
Dimethyl phthalate	mg/Kg	8270D								<0.046	<0.046	
Di-n-butyl phthalate	mg/Kg	8270D	5.0333	6320	82,100					<0.054	<0.054	
Di-n-octyl phthalate	mg/Kg	8270D	0	632	8210					<0.058	<0.058	
Fluoranthene	mg/Kg	8270D	88.8778	2390	30,100					0.18	0.84	
Fluorene	mg/Kg	8270D	14.8299	2390	30,100					0.0054 J	<0.0050	
Hexachlorobenzene	mg/Kg	8270D	0.0252	0.252	1.15					<0.0082	<0.0082	
Hexachlorobutadiene	mg/Kg	8270D		1.63	7.19					<0.056	<0.056	
Hexachlorocyclopentadiene	mg/Kg	8270D		2.55	10.8					<0.20	<0.20	
Hexachloroethane	mg/Kg	8270D		2.52	11.1					<0.054	<0.054	
Indeno[1,2,3-cd]pyrene	mg/Kg	8270D		1.15	21.1					0.054	0.16	
Isophorone	mg/Kg	8270D		571	2420					<0.040	<0.040	
Naphthalene	mg/Kg	8270D	0.6582	5.52	24.1					<0.0055	0.23	
Nitrobenzene	mg/Kg	8270D								<0.0088	<0.0088	
N-Nitrosodi-n-propylamine	mg/Kg	8270D		0.078	0.328					<0.043	<0.043	
N-Nitrosodiphenylamine	mg/Kg	8270D	0.0764	111	469					<0.042	<0.042	
Pentachlorophenol	mg/Kg	8270D	0.0028	1.02	3.97					<0.57	<0.57	
Phenanthrene	mg/Kg	8270D								0.078	0.65	
Phenol	mg/Kg	8270D	2.2946	19,000	100,000					<0.079	<0.079	
Pyrene	mg/Kg	8270D	54.5455	1790	22,600					0.15	0.68	
Polycyclic Aromatic Hydrocarbons (PAHs)												
1-Methylnaphthalene	mg/Kg	8270D		17.6	72.7		0.066 J	0.77	0.69			<0.0087
2-Methylnaphthalene	mg/Kg	8270D		239	3010		0.074 J	1.1	0.84			<0.0066
Acenaphthene	mg/Kg	8270D		3590	45,200		0.1	0.47	0.041			<0.0064
Acenaphthylene	mg/Kg	8270D					0.023 J	0.052	<0.0050			<0.0047
Anthracene	mg/Kg	8270D	196.9492	17,900	100,000		0.19	0.55	0.074			<0.0060
Benzo[a]anthracene	mg/Kg	8270D		1.14	21		0.91	0.83	0.3			0.012 J
Benzo[a]pyrene	mg/Kg	8270D	0.47	0.115	2.11		1.1	0.87	0.32			<0.0069



Sample							B-7	B-8	B-9	B-10	B-11	B-12	
Depth (feet)			NR 720 RCLs	NR 720 RCLs -	NR 720 RCLs -	Background	3-5	9-11	4-6	3-4	2-3	3.5-5.5	
Soil Type	Units	Method	for GW Protection (1)	Non-Industrial Use for Direct Contact Protection (1)	Industrial Use for Direct Contact Protection (1)	Threshold Value	SAND & GRAVEL	Silty CLAY	Sandy CLAY	FILL	FILL	Silty CLAY	
Soil Conditions							Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated	
Sampling Date				, ,			4/10/2020	4/10/2020	4/10/2020	4/23/2020	4/23/2020	4/10/2020	
Benzo[b]fluoranthene	mg/Kg	8270D	0.4781	1.15	21.1		1.5	0.95	0.57			<0.0077	
Benzo[g,h,i]perylene	mg/Kg	8270D					0.4	0.28	0.13			<0.012	
Benzo[k]fluoranthene	mg/Kg	8270D		11.5	211		0.49	0.32	0.14			<0.011	
Chrysene	mg/Kg	8270D	0.1442	115	2110		1.1	0.84	0.45			<0.0097	
Dibenz(a,h)anthracene	mg/Kg	8270D		0.115	2		0.13	0.097	0.053			<0.0069	
Fluoranthene	mg/Kg	8270D	88.8778	2390	30,100		2.2	2.2	0.55			<0.0066	
Fluorene	mg/Kg	8270D	14.8299	2390	30,100		0.083	0.48	0.031 J			<0.0050	
Indeno[1,2,3-cd]pyrene	mg/Kg	8270D		1.15	21.1		0.37	0.27	0.12			<0.0093	
Naphthalene	mg/Kg	8270D	0.6582	5.52	24.1		0.064	2.1	0.67			<0.0055	
Phenanthrene	mg/Kg	8270D					1.4	2.4	0.67			<0.0050	
Pyrene	mg/Kg	8270D	54.5455	1790	22,600		2.1	1.8	0.5			0.011 J	
Polychlorinated Biphenyls (P	CBs)												
PCB-1016	mg/Kg	8082A		4.11	28			< 0.0063		<0.0062	<0.0063		
PCB-1221	mg/Kg	8082A		0	0.883			<0.0078		<0.0078	<0.0078		
PCB-1232	mg/Kg	8082A		0.19	0.792			<0.0078		<0.0077	<0.0078		
PCB-1242	mg/Kg	8082A		0.235	0.972			<0.0059		<0.0058	<0.0058		
PCB-1248	mg/Kg	8082A		0.236	0.975			<0.0070		<0.0070	<0.0070		
PCB-1254	mg/Kg	8082A		0.239	1			0.13		<0.0038	0.11		
PCB-1260	mg/Kg	8082A		0.243	1			<0.0088		<0.0087	<0087		
RCRA Metals													
Arsenic	mg/Kg	6010B	0.584	0.677	3	8.3	5.8	6.2	18	1.8	16	7.9	
Barium	mg/Kg	6010B	164.8	15,300	100,000	364	69	34	53	15	42	23	
Cadmium	mg/Kg	6010B	0.752	71.1	985	1	0.41 B	0.38 B	<0.21	0.22 B	0.82 B	0.57 B	
Chromium	mg/Kg	6010B	360,000*			44	17	15	35	5.5	14	12	
Lead	mg/Kg	6010B	27	400	800	51.6	140	22	56	6.9	53	9.5	
Mercury	mg/Kg	7471A	0.208	3.13	3.13		0.066	0.091	0.07	<0.0058	0.05	0.0078 J	
Selenium	mg/Kg	6010B	0.52	391	5840		< 0.65	<0.58	<0.67	<0.54	<0.56	<0.56	
Silver	mg/Kg	6010B	0.8491	391	5840		0.28 J	0.18 J	0.72	<0.12	0.22 J	0.21 J	
Oranochlorine Pesticides													
4,4'-DDD	mg/Kg	8081A		1.9	9.57					<0.00035	<0.00036		
4,4'-DDE	mg/Kg	8081A		2	9.38					0.0013 J	0.003		
4,4'-DDT	mg/Kg	8081A		1.89	8.53					<0.00093	<0.00094		
Aldrin	mg/Kg	8081A		0.04	0.187					<0.00073	<0.00074		
alpha-BHC	mg/Kg	8081A		0.086	0.365					<0.00045	<0.00045		
cis-Chlordane	mg/Kg	8081A								0.0012 J	<0.00090		



Sample							B-7	B-8	B-9	B-10	B-11	B-12
Depth (feet)			NR 720 RCLs	NR 720 RCLs - Non-Industrial Use for Direct Contact Protection (1)	NR 720 RCLs - Industrial Use for Direct Contact Protection (1)	Background Threshold Value	3-5	9-11	4-6	3-4	2-3	3.5-5.5
Soil Type	Units	Method	for GW				SAND & GRAVEL	Silty CLAY	Sandy CLAY	FILL	FILL	Silty CLAY
Soil Conditions			Protection (1)				Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated	Unstaturated
Sampling Date				( )			4/10/2020	4/10/2020	4/10/2020	4/23/2020	4/23/2020	4/10/2020
beta-BHC	mg/Kg	8081A		0.301	1.28					<0.00055	0.023	
delta-BHC	mg/Kg	8081A								<0.00056	<0.00056	
Dieldrin	mg/Kg	8081A		0.034	0.144					<0.00024	0.0036	
Endosulfan I	mg/Kg	8081A		469	7010					<0.00077	<0.00078	
Endosulfan II	mg/Kg	8081A								<0.00029	<0.00029	
Endosulfan sulfate	mg/Kg	8081A								<0.00032	<0.00033	
Endrin	mg/Kg	8081A	0.1616	19	246					<0.00024	<0.00025	
Endrin aldehyde	mg/Kg	8081A	0.1616	19	246					<0.00030	<0.00030	
Endrin ketone	mg/Kg	8081A								<0.00040	<0.00040	
gamma-BHC (Lindane)	mg/Kg	8081A	0.0023	0.568	2.54					<0.00038	<0.00039	
trans-Chlordane	mg/Kg	8081A								0.00096 J	<0.00047	
Heptachlor	mg/Kg	8081A	0.0662	0.14	0.654					<0.00074	<0.00075	
Heptachlor epoxide	mg/Kg	8081A	0.082	0.072	0.338					<0.00063	<0.00063	
Methoxychlor	mg/Kg	8081A	4.32	316	4100					<0.00034	<0.00035	
Toxaphene	mg/Kg	8081A	0.928	0.493	2.09					<0.0075	<0.0075	
Herbicides												
2,4,5-T	mg/Kg	8151A		632	8210					<0.085	<0.086	
2,4-D	mg/Kg	8151A	0.0362	699	9640					<0.099	<0.10	
2,4-DB	mg/Kg	8151A		1900	24,600					<0.10	<0.10	
Dicamba	mg/Kg	8151A	0.1553	1900	24,600					<0.073	<0.073	
Dichlorprop	mg/Kg	8151A								<0.095	<0.096	
Silvex (2,4,5-TP)	mg/Kg	8151A	0.055	506	6,570					<0.090	<0.090	

### Notes:

- (1) From WDNR RCLs Worksheet dated December 2018
- --- = Not analyzed / No established standard
- \* = Laboratory Control Sample and/or Laboratory Control Sample Duplicate is outside acceptance limits
- \*\* = Combined established standard of 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene; and 3 & 4 Methylphenol
- B = Compound was found in the blank and sample
- F1 = Matrix Spike and/or Matrix Spike Duplicate recovery exceeds control limits
- J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value
- V = Serial solution exceeds control limits
- **BOLD** = Exceeds RCL or Background Threshold Value



Sample				B-16
Depth (feet)	_	NR 720 Non-	NR 720 Industrial	7-8
Soil Type	Units	Industrial Direct	Direct Contact	Gravelly CLAY
Soil Conditions		Contact RCL	RCL	Unsaturated
Sampling Date				4/7/2020
Physical Characteristics	<u> </u>			
Percent Moisture	%			18.0
Percent Solids	%			82.0
Method 537 (modified) - Fluorinated Alkyl Substances	<u>'</u>			
Perfluorobutanoic acid (PFBA)	ug/Kg			0.16 J B
Perfluoropentanoic acid (PFPeA)	ug/Kg			<0.094
Perfluorohexanoic acid (PFHxA)	ug/Kg			<0.051
Perfluoroheptanoic acid (PFHpA)	ug/Kg			<0.035
Perfluorooctanoic acid (PFOA)	ug/Kg	1260	16,400	<0.10
Perfluorononanoic acid (PFNA)	ug/Kg			<0.044
Perfluorodecanoic acid (PFDA)	ug/Kg			<0.027
Perfluoroundecanoic acid (PFUnA)	ug/Kg			<0.044
Perfluorododecanoic acid (PFDoA)	ug/Kg			<0.082
Perfluorotridecanoic acid (PFTriA)	ug/Kg			<0.062
Perfluorotetradecanoic acid (PFTeA)	ug/Kg			<0.066
Perfluoro-n-hexadecanoic acid (PFHxDA)	ug/Kg			<0.054
Perfluoro-n-octadecanoic acid (PFODA)	ug/Kg			<0.034
Perfluorobutanesulfonic acid (PFBS)	ug/Kg			<0.031
Perfluoropentanesulfonic acid (PFPeS)	ug/Kg			<0.024
Perfluorohexanesulfonic acid (PFHxS)	ug/Kg			<0.038
Perfluoroheptanesulfonic Acid (PFHpS)	ug/Kg			<0.043
Perfluorooctanesulfonic acid (PFOS)	ug/Kg	1260	16,400	0.51 J B
Perfluorononanesulfonic acid (PFNS)	ug/Kg			<0.024
Perfluorodecanesulfonic acid (PFDS)	ug/Kg			<0.048
Perfluorododecanesulfonic acid (PFDoS)	ug/Kg			<0.073
Perfluorooctanesulfonamide (FOSA)	ug/Kg			<0.10
NEtFOSA	ug/Kg			<0.029
NMeFOSA	ug/Kg			<0.050
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ug/Kg			<0.48
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ug/Kg			<0.45
NMeFOSE	ug/Kg			<0.087
NEtFOSE	ug/Kg			<0.044
4:2 FTS	ug/Kg			<0.45
6:2 FTS	ug/Kg			<0.18
8:2 FTS	ug/Kg			<0.31
10:2 FTS	ug/Kg			<0.061
DONA	ug/Kg			<0.022
HFPO-DA (GenX)	ug/Kg			<0.13
F-53B Major	ug/Kg			<0.033
F-53B Minor	ug/Kg			<0.027

### Notes:

- B = Compound was found in the blank and sample
- J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value
- MDL = Method Detection Limit
- RL = Reporting Limit or Requested Limit (Radiochemistry)



Sample					TW-3	Trip Blank
Screened Interval (feet bgs)	1		NR 141.10 PAL -	NR 140.10 ES -	10-20	
Sample Time	Units	Method	Preventative	Enforcement	18:00	
Sampling Date			Action Limit (1)	Standard (1)	4/10/2020	4/10/2020
Volatile Organic Compounds (VC	)Cs)					
1,1,1,2-Tetrachloroethane	ug/L	8260B	7	70	<23	<0.46
1,1,1-Trichloroethane	ug/L	8260B	40	200	<19	<0.38
1,1,2,2-Tetrachloroethane	ug/L	8260B	0.02	0.2	<20	<0.40
1,1,2-Trichloroethane	ug/L	8260B	0.5	5	<18	<0.35
1,1-Dichloroethane	ug/L	8260B	85	850	120	<0.41
1,1-Dichloroethene	ug/L	8260B 8260B	0.7	7	<20 <15	<0.39 <0.30
1,1-Dichloropropene 1,2,3-Trichlorobenzene	ug/L ug/L	8260B			<23	<0.46
1,2,3-Trichloropropane	ug/L ug/L	8260B	12	60	<21	<0.41
1,2,4-Trichlorobenzene	ug/L	8260B	14	70	<17	<0.34
1,2,4-Trimethylbenzene**	ug/L	8260B	96	480	6800	<0.36
1,2-Dibromo-3-Chloropropane	ug/L	8260B	0.02	0.2	<100 *	<2.0
1,2-Dibromoethane	ug/L	8260B	0.005	0.05	<19	<0.39
1,2-Dichlorobenzene	ug/L	8260B	60	600	<17	<0.33
1,2-Dichloroethane	ug/L	8260B	0.5	5	<20	<0.39
1,2-Dichloropropane	ug/L	8260B	0.5	5	<21	<0.43
1,3,5-Trimethylbenzene**	ug/L	8260B	96	480	2700	<0.25
1,3-Dichlorobenzene	ug/L	8260B	60	600	<20	<0.40
1,3-Dichloropropane	ug/L	8260B	45	 7 <i>C</i>	<18	<0.36
1,4-Dichlorobenzene	ug/L	8260B	15	75	<18	<0.36
2,2-Dichloropropane 2-Chlorotoluene	ug/L	8260B			<22 <16	<0.44 <0.31
4-Chlorotoluene	ug/L ug/L	8260B 8260B			<17	<0.35
Benzene	ug/L	8260B	0.5	5	170	<0.15
Bromobenzene	ug/L	8260B			<18	<0.36
Bromochloromethane	ug/L	8260B			<21	<0.43
Bromodichloromethane	ug/L	8260B	0.06	0.6	<19	<0.37
Bromoform	ug/L	8260B	0.44	4.4	<24	<0.48
Bromomethane	ug/L	8260B	1	10	<40	<0.80
Carbon tetrachloride	ug/L	8260B	0.5	5	<19	<0.38
Chlorobenzene	ug/L	8260B			<19	<0.39
Chloroethane	ug/L	8260B	80	400	35 J	<0.51
Chloroform	ug/L	8260B	0.6	6	<19	<0.37
Chloromethane	ug/L	8260B	3	30	<16	<0.32
cis-1,2-Dichloroethene cis-1,3-Dichloropropene	ug/L	8260B 8260B	7 0.04	70 0.4	<b>200</b> <21	<0.41 <0.42
Dibromochloromethane	ug/L ug/L	8260B	6	60	<24	<0.49
Dibromomethane	ug/L	8260B			<14	<0.27
Dichlorodifluoromethane	ug/L	8260B	200	1000	<34	<0.67
Ethylbenzene	ug/L	8260B	140	700	1500	<0.18
Hexachlorobutadiene	ug/L	8260B	0.1	1	<22	<0.45
Isopropyl ether	ug/L	8260B			<14	<0.28
Isopropylbenzene	ug/L	8260B			410	<0.39
Methyl tert-butyl ether	ug/L	8260B	12	60	<20	<0.39
Methylene Chloride	ug/L	8260B	0.5	5	<82	<1.6
Naphthalene	ug/L	8260B	10	100	680 B	<0.34
n-Butylbenzene	ug/L	8260B			1800	<0.39
N-Propylbenzene	ug/L	8260B			850 970	<0.41
p-Isopropyltoluene sec-Butylbenzene	ug/L ug/L	8260B 8260B			730	<0.36 <0.40
Styrene Styrene	ug/L ug/L	8260B	10	100	<19	<0.39
tert-Butylbenzene	ug/L	8260B			77	<0.40
Tetrachloroethene	ug/L	8260B	0.5	5	<19	<0.37
Toluene	ug/L	8260B	160	800	80	<0.15
trans-1,2-Dichloroethene	ug/L	8260B	20	100	<17	<0.35
trans-1,3-Dichloropropene	ug/L	8260B	0.04	0.4	<18	<0.36
Trichloroethene	ug/L	8260B	0.5	5	<8.2	<0.16
Trichlorofluoromethane	ug/L	8260B			<21	<0.43
Vinyl chloride	ug/L	8260B	0.02	0.2	<10	<0.20
Xylenes, Total	ug/L	8260B	800	4,000	3500	<0.22



# Table 3. Summary of Groundwater Quality Test Results Community within the Corridor Limited Partnership - East Block 2748 N 32nd Street, Milwaukee, Wisconsin

Sample	- Units	Method	NR 141.10 PAL - Preventative Action Limit (1)	NR 140.10 ES - Enforcement Standard (1)	TW-3	Trip Blank
Screened Interval (feet bgs)					10-20	
Sample Time					18:00	
Sampling Date					4/10/2020	4/10/2020
Semivolatile Organic Compounds (SVOCs)						
1-Methylnaphthalene	ug/L	8270D			2900 J	
2-Methylnaphthalene	ug/L	8270D			4400	
Acenaphthene	ug/L	8270D			<490	
Acenaphthylene	ug/L	8270D			<420	
Anthracene	ug/L	8270D	600	3000	<530	
Benzo[a]anthracene	ug/L	8270D			<89	
Benzo[a]pyrene	ug/L	8270D	0.02	0.2	<160	
Benzo[b]fluoranthene	ug/L	8270D	0.02	0.2	<130	
Benzo[g,h,i]perylene	ug/L	8270D			<590	
Benzo[k]fluoranthene	ug/L	8270D			<100	
Chrysene	ug/L	8270D	0.02	0.2	<110	
Dibenz(a,h)anthracene	ug/L	8270D			<80	
Fluoranthene	ug/L	8270D	80	400	<720	
Fluorene	ug/L	8270D	80	400	<390	
Indeno[1,2,3-cd]pyrene	ug/L	8270D			<120	
Naphthalene	ug/L	8270D	10	100	13000	
Phenanthrene	ug/L	8270D			1100 J	
Pyrene	ug/L	8270D	50	250	<670	
Dissolved RCRA Metals						
Arsenic	ug/L	6020A	1	10	420	
Barium	ug/L	6020A	400	2000	1300	
Cadmium	ug/L	6020A	0.5	5	16	
Chromium	ug/L	6020A	10	100	610	
Lead	ug/L	6020A	1.5	15	1800	
Mercury	ug/L	7470A	0.2	2	1	
Selenium	ug/L	6020A	10	50	<49	
Silver	ug/L	6020A	10	50	1.9 J	

#### Notes:

- (1) From 2019 WDNR Ch. NR 140, Wis. Adm. Code public health groundwater quality standards
- --- = Not analyzed / No established standard
- \* = Laboratory Control Sample and/or Laboratory Control Sample Duplicate is outside acceptance limits
- \*\* = The combined total of 1,2,4 and 1,3,5-TMB
- B = Compound was found in the blank and sample
- J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

#### **BOLD = Exceeds NR 140 Enforcement Standard (ES)**

Italics = Exceeds NR 140 Preventative Action Limit (PAL)



#### **APPENDIX**



#### APPENDIX A

Historical Preservation Certification Application



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 W. Center St., 2748 N. 32<sup>nd</sup> St., 2727 N. 32<sup>nd</sup> St. Milwaukee, WI 53210

#### **Description of Physical Appearance:**

#### Setting:

The Briggs and Stratton Corporation West Plant is located in the Sherman Park neighborhood in northwest Milwaukee (Figure 1). Elevated railroad tracks form the eastern boundary of the neighborhood and run along the east edge of the plant. Most of the properties to the north, south, and east of the West Plant are active industrial sites while the neighborhood immediately east of the plant is primarily residential composed of ca. 1920 single-family houses. Because of the active manufacturing activities which surround the plant, the vicinity retains an industrial feeling. Deteriorated concrete sidewalks run along both sides of Center, 32nd, 33rd and Hadley Streets, and in places where the buildings to not abut these walks directly, chained-link fence encloses the property. Most of the lots have been fully developed, although many of the buildings contain small courtyards to allow light into the early twentieth century buildings. The plant also contains two larger open spaces: 2727 N 32nd Street which remains open and was historically used as a parking lot, and a current parking lot which sits at the north end of the 2748 N 32nd Street property.

#### Site:

The plant contains approximately 8.18 acres spread over two city blocks in the northern two quadrants of the intersection of Center and 32nd Streets (Figure 2). The plant is bounded by Center Street to the south, the railroad to the east, 33rd Street to the west, and partially by Hadley Street and partially by neighboring industrial sites to the north.

#### Plant:

The plant is composed of five parcels, four of which contain buildings and one which has always remained open (Figure 3). For the purposes of this nomination and ease of understanding, this section will first provide individual descriptions of each of the properties which compose the plant, and will then assess the appearance and integrity of the plant as a whole.

#### 2748 N 32nd Street (Parcel #309-0501):

The 2748 N 32nd Street parcel contains one building with eight additions and one structure all constructed between 1906 and ca. 1960 (Figure 4). Buildings 1A-1D, Boiler House 1 and Stack 1 represent the original 1906 construction period, and originally these structures formed a central open courtyard laid out with walking paths and green space for employee use (the courtyard was enclosed in 1950). Building 1B and additions 4A and 4B form a second courtyard which was utilized as the main truck loading and shipping area between ca. 1920 and ca. 1945. After World War II the area north of addition 4A was paved and utilized as the primary loading and shipping area.

#### Building 1A, Administrative Building (1906):

Building 1A was built as the administration building for the original factory in 1906 (Photograph 1). It is a three-story red brick building with limestone detailing. The façade (south elevation) of the building features three projections: the two end bays and a two-story central entrance vestibule. The first story of the building is marked by cream-colored brick at the corners and a limestone water table. A second band of limestone visually separates the first story from the second and serves as the sill for the second story windows. The third story contains limestone sills and a limestone band which runs just below the window arches. The cornice is marked by brick dentils, and the two end projections are topped with limestone detailing. The first story retains its historic three-pane, wood-framed windows, but all of the openings in the second and third stories have either been entirely filled or partially-filled and refit with smaller windows. The historic front door has been replaced and its transom filled. The east and west (side) elevations each continue the limestone details from the front elevation (Photograph 9). The east elevation contains three original windows in the ground story, five modified windows in the second story, and three modified windows in the third story. The west elevation contains four original windows in the ground story, but the four windows in both the second and third stories have been either filled or partially-filled and refit with smaller windows.

The interior of Building 1A has been largely renovated for use as modern office space. The building's historic features include the front lobby which retains its two-story plasters framing the front door and early twentieth century pendant lamp (Photograph 10). The staircase retains its historic steel posts and railings, although the treads have been either covered or replaced. The basement has what appears to be a modern poured concrete floor; brick columns support the floors above. The first floor contains modern tiled floors and late-twentieth century drop ceilings. Many of the interior stud walls are in a state of demolition (Photograph 11). The second floor also has tiled floors and drop ceilings, although on this floor

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the drop ceiling does not hide the arched window frames (Photograph 12). Most of the historic doors have been removed, except for a pair of wood five-paneled doors on the second floor which lead from Building 1A to the factory space in Building 1B.

#### Building 1B, Factory (1906):

Building 1B was built as the original 1906 factory (Photograph 2). It is a three-story, roughly U-shaped cream-colored brick building with more-or-less uniform detailing. The cornice is marked by brick dentils. At the west elevation, the architect divided the façade into six segments and slightly projected alternating segments to add visual interest (Photographs 7 and 8). The cornice, too, changes with the alternating sections. Throughout, the building contains eight-over-eight wood sash windows in the first story, and twelve-over-twelve wood sash windows in both the second and third stories. All of these windows contain limestone sill and brick segment arches. Most of the first-story windows have been boarded over to deter vandalism, but it appears that most of these openings retain the original windows. A small number of windows at the northwest corner of the building have been replaced with glass block. Three openings have been cut into the south elevation just west of where Building 1B connects to Building 1A, and portions of the building have been obscured by later additions.

The basement of Building 1B is largely open space with poured concrete floors, reinforced concrete posts, and exposed brick walls (Photograph 13). Brick walls with arched openings and sliding metal fire doors divide the building into six sections. This level retains many of its exterior wood sash windows, although some of the windows which historically opened into the courtyard were removed when the 1950 addition was built (addition 4) (Photograph 14). Most of the first floor is open factory space. Wood and iron posts support an iron structural system which holds wooden rafters. Brick walls with metal sliding fire doors separate the different sections of the factory. A few rooms (a medical room, locker rooms, restrooms, etc.) have been carved out of the factory space and enclosed with stud walls (Photographs 15, 17 and 18). The northwestern corner of the first floor has been enclosed for use as an office space and contains carpeted floors, midcentury wood wall paneling and mid-century drop ceiling, but most of the first floor retains its historic factory appearance (Photograph 19). The second floor is very similar to the first, except where the first floor's skeletal structure was largely reinforced with iron beams, the second floor structure is almost completely wooden (Photographs 22 and 23). Like the first floor, brick walls with arched openings and sliding metal fire doors divide the separate sections of the factory, and a few smaller rooms have been created with wood stud walls, but the floor remains largely open factory space with exposed brick walls, wood floors and open rafter ceilings. The stairwells in Building 1B also retain most of their historic materials with open wood treads, simple carved newel posts, and industrial pipe handrails (Photograph 21).

#### Building 1C, Shipping Shed 1 (ca. 1906):

Building 1C is a one-story brick structure built onto the east elevation of the southeast wing of Building 1B, between that building and the railroad tracks (Photograph 2). It was built at the same grade as the elevated tracks, and therefore is aligned with the second story of Building 1B. The east elevation contains a central bay door which has been filled with concrete block. There are four windows openings on either side of this door similarly filled. The south elevation contains a twelve-pane awning window with a limestone sill and a brick segment-arch. The scale of the filled openings on the east elevation suggests that the historic windows were likely of the same type. The interior is open space with badly deteriorated wood floors (Photograph 24).

#### Building 1D, Shipping Shed (ca. 1906):

Building 1D is a one-story brick structure built onto the east elevation of the northeast wing of Building 1B between that building and the railroad tracks. The building's east elevation contains three loading bays, which have been filled. The building's interior is an open space with a poured concrete floor (Photograph 25).

#### Boiler House 1 (1906):

Boiler House 1 is a one-story brick structure built in 1906 to serve the adjacent factory. Most of the building's windows have been broken and subsequently boarded over, but from architectural evidence, it appears that the building historically contained two-over-two wood sash, wire-glass windows throughout. The south elevation contains one full-bay sliding fire door and evidence of two filled windows. The west elevation contains six and the north elevation contains two window openings, all of which have been boarded. The historic east elevation has been entirely obscured by a ca. 1920 coal house addition (Building 1, Addition 1). The building's interior is largely open, with exposed brick walls. An underground,

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concrete-lined tunnel extends from the north end of the building to the basement of Building 1B, and was likely added ca. 1920 (Photograph 26). Portions of the historic cast-iron boiler system remain in place.

An approximately 140-foot-tall, brick smoke stack stands immediately west of boiler house 1.

#### Addition 1. Coal House (ca. 1920):

The coal house addition was built onto the east side of the boiler house and is a one-story shed-roof brick structure. The building's east elevation contains four equally-spaced loading bays, all of which appear to have historically contained overhead doors, and all of which have been completely filled with concrete block. The building's south elevation contains one boarded window The interior is a long open space with a poured concrete floor and exposed brick walls.

#### Addition 2A, Factory (ca. 1920):

Additions 2A and 2B were designed and built contemporaneously (Photograph 4). Addition 2A is a two-story reinforced-concrete building with a steel truss roof. A geometric pattern ornaments the cornice line at the east end of the building, but only continues partially at the north and south elevations. The building contains large, steel-framed factory windows in each elevation; the first story contains 65-pane windows (except at the west elevation where the windows have been covered with corrugated metal), and the second story contains 91-pane windows. Steel-framed windows appear at the basement level as well; the windows in the north and south elevations span the full bay while the east elevation contains three six-pane windows in each bay. The building has two brick-walled stairwell protrusions, one at the west end of the south elevation and a second at the east end of the north elevation. A bridge connects the upper story of Addition 4 to the upper story of Building 1B and contains three six-pane, steel-framed windows on each its east and west elevations (Photographs 6 and 31).

All three levels of the building's interiors are open factory space with poured concrete floors and exposed pipes. The basement level and first floor contain three rows of reinforced concrete columns (Photographs 27 through 29). The second floor is completely open, as the exposed steel truss roof structure doesn't require additional support (Photograph 30). Brick walls separate the factory space from the stair wells. The interior retains a number of its historic doors, including metal fire doors between the factory space and the stairwells and wood five-panel doors which lead to the washrooms. The stairwells contain reinforced concrete stairs with industrial pipe hand railings.

#### Addition 2B, Packing Plant (ca. 1920):

Addition 2B is nearly identical to Addition 2A. The east and west elevations (where visible) are similar in materials and appearance, and like that addition, Addition 2B contains 65-pane, steel-framed factory windows in the first story and 91-pane factory windows in the second story. The primary difference is that the north elevation is faced with brick. The east elevation contains a one-story, shed-roof wing which runs along the entire length of the building and which served as a loading dock for the adjacent rail line (Photograph 34). The west elevation also contains a one-story shed-roof loading dock which served the trucking system from the courtyard.

The interior of Addition 2B is also nearly identical to Addition 2A. At the basement level and on the first floor the space is open except for three rows of reinforced concrete columns (Photographs 32 and 33). The second floor is completely open except for a single row of concrete posts which run across the opening between the two additions (Photograph 35). Addition 2B retains most of its historic doors, many of which are metal fire doors.

#### Addition 3 (ca. 1930):

Addition 3 is a two-story, brick-faced, reinforced-concrete structure built onto the north elevation of the northeast stairwell of Addition 2A. The north elevation of this addition contains four bays. At the first story the openings are shielded by an open loading dock; the eastern-most bay of the addition contains a modern overhead garage door topped with a 12-light, steel-framed transom and the other three bays each contain 16-pane, steel-frame factory windows. The second story contains four 42-pane, steel-framed factory windows. The addition's east elevation contains two steel-framed factory windows in the second story, but the first story was obscured by Addition 5 (ca. 1950). The interior of Addition 3 is used as washroom space, with painted brick walls, exposed pipes, and poured-concrete floors (Photograph 36).

Addition 4, Heat Treating Plant (1950):

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Addition 4 was built in 1950 at the basement level of the interior courtyard of Building 1B. The building is a steel structure with corrugated metal siding and roof. The most notable feature of the addition is the steel-truss roof structure which contains three raised clerestories composed of steel-factory windows which flood the interior space with light from above (Photograph 37). The roof slopes down at the north, west, and south ends so as not to block sunlight from the first story windows of Building 1B. The east end of the addition contains a first story bridge which spans the historic courtyard from the southeast to the northeast wing of Building 1B. The interior is mostly open space with a poured concrete floor and two rows of steel supports. The supports at the east end of the space which hold up the bridge are encased in concrete (Photograph 38). The brick walls of the 1906 building are left exposed, and many of the historic windows were removed.

#### Addition 5, Loading Dock (ca. 1950):

Addition 5 is a one-story, open loading dock built on to the north elevation of Addition 3 (Photograph 39). It is a shed-roof structure supported by reinforced concrete posts with a wood deck on a poured-concrete foundation. The open ceiling exposes the wood rafters, and the roof structure is enclosed with wood siding; a roof protrusion shields a hoisting pulley.

#### Addition 6, Transfer House (ca. 1950):

Addition 6 is a brick split-level transfer house built on a concrete foundation with steel beam roof (Photographs 3 and 4). The north elevation contains two small vents. The west elevation contains two bays: the north bay contains a six-pane, steel-framed awning window; and the southern bay contains a pair of metal doors. The southern half of the east elevation is obscured by Addition 3, while the northern half contains a single metal door.

#### Addition 7, "I" Factory (ca. 1950):

Addition 7 extends from the northern elevation of addition 4B to the southern elevation of the building on the neighboring property (2784 N 32nd Street) (Photograph 3). It is a masonry building, partially constructed of brick and partially constructed of concrete block, on a poured concrete foundation. The roof structure is steel and it contains three steel-framed, gabled skylights. The west elevation contains 12 bays: the first through third and seventh through eleventh bays (from north) each contain nine-pane, steel-framed windows. The fourth and fifth bays are shielded by a standing-seam metal shed roof; the fourth bay contains a pair of four-light wood doors, and the fifth bay contains a wood paneled overhead door. The sixth bay contains a bay door opening with a steel lift-gate. The twelfth bay is located under the roof of the loading dock (Addition 5) and contains a four-light, wood paneled overhead door. The east elevation contains nine bays, each of which contains a 15-pane, steel-framed casement window.

The interior of Addition 7 is mostly open space with two rows of concrete and steel posts and a plywood partition wall around the bay doors (Photographs 40 through 42). The space has poured concrete floors, exposed pipes, and hanging fluorescent lights. At the north end of the building is a raised concrete loading platform. There are two sets of stairs at the northeast corner of the room, one which leads up to the platform and a second which descends to the basement, which is also an open space with concrete floors and concrete pillars.

#### Addition 8, Guard House (ca. 1960):

Addition 8 is a one-story guard house building situated at the southwest corner of Addition 2A with brick walls and a shingled hip roof (Photograph 5). The north elevation contains a metal half-light door. The west and south elevations contain a large wrap-around plate-glass window; at the west elevation, the window has been boarded over.

#### 3212 W Center Street (Parcel #309-1205)

The 3212 W Center Street parcel contains one building (constructed 1920) with one addition, built 1946 (Figure 5). When Briggs and Stratton Corporation purchased the property directly north of 3212 W Center Street, they cut a passage through the north wall of the 1946 addition to connect to the southern-most addition of Building 3 (2758 N 33rd Street).

#### Building 2 (1920):

Building 2 is a single-story red brick building on a concrete foundation located at 3212 W Center Street (Photograph 42). It contains a sawtooth-style roof with five rows of steel-framed, wire-glass skylights. The skylights only partially span the length of the building, so do not constitute a true sawtooth roof structure. The south façade contains 14 bays defined by brick piers which stand the full-height of the building and contain three limestone courses near the roofline. A limestone band runs along the entirety of the building and sits atop the window openings. A second band of limestone coping tops the parapet roof, and limestone was utilized for the window sills. The bays at either end of the façade feature a

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pedimented roofline with parquet-pattern brickwork. The sixth and ninth bay (from west) feature arched parapet walls, with arched limestone details and parquet-pattern brick work. The ninth bay was the historic main entrance of the building, but this entrance has been completely filled with brick (Photograph 43). The first and fourteenth bays contain two five-pane, steel-framed industrial windows and are separated by a brick pier. The sixth bay contains three five-paneled, steel-framed industrial windows. The ninth bay contains two five-pane, steel-framed industrial windows which historically flanked the now-enclosed entrance. The other bays each contain a ribbon of three five-pane, steel-framed industrial windows. The seventh, eighth, ninth and tenth bays all contain basement lights, all of which have been boarded over.

The east (side) elevation contains six bays and continues the limestone pattern from the south façade (Photograph 45). The first bay (from south) is styled identically to the end bays of the south façade. The second, third, and sixth bays each contain a set of three 20-pane, steel-framed industrial windows separated by limestone piers. The fifth bay contains two windows of the same type. The fourth bay contains the entrance to the building, a recessed doorway with a metal half-light door. The door surround is surrounded by wood panels which may have historically contained sidelights and a transom, but if those elements existed historically, they have all since been boarded over. Above the recessed opening, in the fourth bay sits an eight-pane, steel framed window, and a second 20-pane, steel-framed window sits directly to the north.

The north (rear) elevation is constructed of cream colored brick and contains ten bays, seven to the east and three to the west of the 1946 addition (Photographs 46 and 47). The bays are visually separated by brick piers. Each bay historically contained three 20-pane, steel-framed industrial windows of the same type that appear on the east elevation. Most of these windows have been boarded from the interior. The fifth bay (from west) has been obscured by an added one-story secondary-entrance vestibule sheathed in corrugated metal. The door to this vestibule has been boarded over, but appears to have historically contained a transom (also boarded over). The sixth and seventh bays are not visible from the street because an electricity generating substation was built immediately adjacent the building, and all of the windows in these two bays have been filled with concrete block to accommodate the electrical system. The first bay west of the addition historically contained three windows, but the first two openings have been enlarged to fit a bay door opening which contains a pair of wood doors. A standard-sized door opening was cut into one of these doors and contains a modern metal door. The other two bays west of the addition each contain three 20-pane, steel-framed windows. The west (side) elevation contains six bays and continues the limestone pattern from the south façade (Photographs 48 and 49). The first bay (from south) is styled identically to the end bays of the south façade. The other five bays each contain three 20-pane, steel-framed windows.

Building 2 contains a partial basement with poured concrete walls, poured concrete floors, and reinforced concrete pillars (Photograph 50). The first floor of the building is mostly open space, except for a small cluster of rooms at the center of the south wall (where the historic main entrance stood), an entrance vestibule at the eastern entrance, and a concrete block room at the northwestern corner of the space (Photograph 51). Metal posts spaced evenly throughout the room reinforce the roof structure (Photograph 52). The room at the northwest corner contains historic sliding doors, but all of the other door openings contain modern metal swing doors (Photograph 53).

#### Building 2, Addition 1 (1946):

Only the east and west elevations of the 1946 addition are visible, as the wing was built onto the north elevation of building 2, and the 1956 addition of building 3 abuts the north elevation (Photographs 46 and 47). The 1946 addition is a one-story concrete block structure with brick sheathing on a concrete block foundation. The west elevation contains four bays. The first, third and fourth bays (from south) each contain a pair of 20-pane, steel-framed factory windows; but one of the windows in the first bay has been partially refitted with a metal vent. The second bay contains historically contained three truck loading doors, but one has been filled with brick. The southern opening contains a metal overhead door, and the northern opening contains a wood paneled overhead door. The east elevation contains five bays all of which contain 20-pane, steel-framed factory windows. The first and third bays (from south) each contain a single window, while the second, fourth and fifth bays each contain a pair of windows.

The interior of this addition is mostly open space with a concrete floor and steel posts which support a steel structure roof (Photograph 54). Two small rooms, one at the southwest and one at the southeast corner of the space, are walled with

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concrete and contain sliding metal fire doors. A concrete ramp ascends from this building to Building 3, Addition 3 (2758 N 33rd Street).

#### 2758 N 33rd Street (Parcel #309-0503)

The 2758 N 33rd Street parcel contains one building with five additions and one structure all constructed between 1925 and 1959 (Figure 6).

#### Building 3 (1925):

Building 3 is a three story cream-colored brick building located at the southwest corner of 33rd and Hadley Streets oriented to the west (Photograph 55). The building has a flat roof, with a parapet roof topped with limestone. The roof holds three shed-roof style steel-framed industrial skylights. The building historically contained six-over-nine wood sash windows throughout, but many of the historic window openings have been covered by later additions. The façade (west) elevation contains nine bays. The first story is mostly hidden by a one-story office addition (Addition 5, built 1959), but the first five bays (from north) retain the top sashes of their historic windows above this addition; each of these bays contains sets of three wood, six-pane, fixed-sash windows. The window openings in the other three bays have been filled with glass block. The second and third stories contain sets of three typical windows in each bay.

The south (side) elevation contains four bays (Photograph 56). The first story is mostly hidden by later additions, but the window openings (which appear above addition 5) in both the first and second bay (from west) have been filled with glass block. The third bay contains a standard swing door and a typical window. The fourth bay was obscured by Addition 3 in ca. 1948. The first three bays in the second story each contain a set of three typical windows; the fourth bay was hidden by Addition 3. The first three bays in the third story each contain a set of three typical windows. The fourth bay contains a ten-pane, metal-framed window.

The east (rear) elevation contains eleven bays. At the southern end of the east elevation, the first four bays (from south) protrude from the main block of the building. The first story completely obscured by later additions. The second story was partially obscured by Addition 1 in ca. 1930, but the seven bays which remain all contain typical windows. In the third story, the first, second, and fourth bay each contain ten-pane, metal-framed windows. The third bay contains a nine-pane, metal-framed window. The remaining bays each contain sets of typical windows. Above the third bay, the building rises to a fourth story to provide roof access. The east elevation of this stairwell block contains a six-pane, metal-framed window; and the south elevation of this block contains a metal fire door.

The north (side) elevation contains three bays. The first story, first bay (from west) historically contained a set of three typical windows, but these windows have been modified to accommodate Addition 4, and now contain a set of three nine-pane, wood fixed-sash windows. The second bay contains a set of three typical windows, but the central window has been partially filled to accommodate a vent. The third bay contains a pedimented entrance vestibule with a metal door and a pair of four-over-six, wood sash windows. The other two stories both contain three bays which all retain sets of three typical windows.

The interior of Building 3 is mostly open manufacturing space with, exposed brick walls, wood posts, wood floors, and exposed wood joists throughout (Photographs 63 and 64). There are stairwells located in both the northeast and southeast corners of the building, both of which contain wood stair cases with carved wood newel posts and bead-board railings. The first floor contains a number of mid-century metal doors which lead to the building's later additions, but the original factory doors have been removed. The third story contains four small rooms aligned in the center of the building built with modern materials (Photograph 65).

#### Boiler House 2 (ca. 1925):

Boiler House 2 is a two-story L-shaped brick structure built at the northern end of the east elevation of Building 3 (Photograph 62). The building has pairs of nine-pane, steel-framed windows in the first story, and 24-pane, steel-framed factory windows in the second. The north elevation contains three bays, with typical windows in each bay. The east elevation also contains three bays. The first bay in the first story contains a window opening which has been fit with a pair of steel doors. The second bay contains a standard-size metal swing door. The third bay historically contained a typical window opening, but this opening has been enlarged and partially filled with sheet metal and a metal exhaust vent. The second story contains three typical windows. The south elevation contains three bays; the first two bays contain typical openings in both stories, while the third bay contains twelve-pane, steel-framed industrial windows in both stories.

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The boiler house was built below grade, and the interior contains poured-concrete floors, a reinforced concrete staircase with industrial-pipe handrail, and retains a portion of its historic boiler equipment. The second story also has poured concrete floors.

An approximately 120 foot tall brick smoke stack stands immediately south of Boiler House 2.

#### Building 3, Addition 1 (ca. 1930):

Addition 1 was built onto the rear (east) elevation of Building 3 in ca. 1930. It is a two-story concrete block structure faced with cream-colored brick. The roof contains three shed-style industrial skylights. The building contains 20-pane, steel-framed industrial windows throughout, except where otherwise noted. The north elevation contains four bays. At the first story, the first bay (from east) contains a pair of metal swing doors, and the other three bays contain window openings, all of which have been boarded. The first three bays in the second story contain typical windows, and the fourth bay contains a 12-pane, steel-framed window. Approximately half of the east elevation is hidden behind a neighboring building (Photograph 61). The exposed portion of the building contains six bays, each of which contain typical windows in both the first and second stories. The south elevation was obscured by the *circa*-1948 addition (Addition 3). The first story of the west elevation was obscured by the *circa*-1940 addition (Addition 2). The second story contains a continuous wall of steel-framed industrial windows.

The interior of Addition 1 is very similar to the main wing of the building, with exposed brick walls, large wood posts, and exposed wood joists (Photograph 66). The first floor of the addition has a poured concrete floor, but the second floor has a wood floor. The second floor is divided into three rooms by stud-wall partitions, a large production space with smaller rooms at each the north and south ends; the doors between these rooms are mid-century metal doors (Photograph 67). The interior of the skylights reveal that these structures are of wood construction with steel-framed windows.

#### Building 3, Addition 2 (ca. 1942):

Addition 2 is a one-story concrete block structure built in the courtyard formed between Building 3 and its *circa-*1930 addition. The roof of this addition contains a steel-framed gabled skylight which has been boarded over. The only exposed elevation, the north elevation contains a 12-pane, steel window which has been boarded and a metal swing door. The additions interior is completely open with a poured concrete floor (Photograph 68). The historic windows from the first stories of both the *circa-*1925 Building 3 and its *circa-*1930 addition (Addition 1) remain in place.

#### Building 3, Addition 3 (ca. 1948):

Addition 3 is a two-story brick and concrete block building which extends to the south from Addition 1. The west elevation contains ten bays (Photographs 57 and 58). In the first story, the first and fourth bays (from north) each contain a metal swing door and a ten-pane, metal-framed window. The second and third bays contain three wood overhead garage doors. The tenth bay contains a wood-paneled overhead garage door. The remaining bays all contain pairs of 20-pane, metal-framed industrial windows. All ten bays in the second story contain pairs of 20-pane industrial windows except the third bay, where one window has been enlarged and refit with a pair of metal bay doors. The east elevation also contains ten bays (Photograph 60). In the first story, each bay contains a pair of 16-pane industrial windows, except the sixth bay (from south) which has been refit with a metal swing door, and the tenth bay where both windows have been filled and refit with metal vents. In the second story, the first seven bays each contain one 20-pane and one 16-pane industrial window, and the last three bays each contain pairs of 20-pane industrial windows.

The first floor interior is open industrial space with a poured concrete floor, with steel posts and I-beams which hold wood floor joists (Photographs 69 and 70). The second floor retains its wooded floorboards and a few historic fire doors (Photographs 71 and 72). Two small pre-fabricated structures have been set up in the space, made of aluminum, acrylic glass, and particle board.

#### Building 3, Addition 4 (1956):

Addition 4 is a two-story concrete block structure faced with cream colored brick built on the south elevation of Addition 3 (Photograph 59). A brick chimney rises from the northwest corner of this addition. The building contains 10-pane, metal-framed windows throughout, except where otherwise noted. The first story of the west elevation contains a large open truck bay. There is a single window opening to the north of this bay which has been retrofitted with a typical window. The

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second story contains six typical windows. The south elevation contains three typical windows in the first story, and six windows in the second story, three of which are typical, and three of which are 20-pane industrial windows. The east elevation contains two openings in each story; the southern opening in the first story historically contained a window, which has been filled with concrete block and refit with a metal swing door, and the other three openings contain 20-pane industrial windows. The north elevation contains five openings in each story; the western-most opening in the first story contains a metal swing door, the other openings all contain steel-framed windows of various sizes.

Addition 4 is the only portion of the Building 3 complex which contains a basement, which has a poured concrete floor, concrete walls, concrete pillars, and a freight elevator (located in the southwest quadrant of the space) (Photograph 73). The western half of the first story is open to street level, while the eastern half of the building is raised to accommodate truck loading (Photographs 74 and 75). The eastern half of the room is separated from the western half of the room by a brick wall which holds three wood overhead garage doors. The second floor is mostly open space, with a concrete floor and concrete pillars (Photograph 76). The only structure in the space is the concrete freight elevator shaft.

#### Addition 5, Office (1959):

Addition 5 is a one-story concrete block structure faced with cream-colored brick which wraps from the south elevation to the north elevation of Building 3 (Photographs 55 and 56). The building has aluminum one-over-one sash windows throughout, except where otherwise noted. The west elevation contains 11 bays, all of which contain typical windows except the tenth bay which historically contained the main entrance to the building, a recessed door way fit with a metal door, sidelight and transom (all of which have been boarded over, flanked on either side by typical windows. The south elevation contains three pairs of typical windows, and the north elevation contains two bays: the first (from west) contained a recessed entrance (which has been filled) and a typical window, and the second contains a pair of typical windows.

The interior of Addition 5 is in relatively poor condition (Photograph 77). In the southwest corner of the building an office was created partially by encasing the historic brick walls with drywall and partially by constructing stud walls. This room has both tile and carpeted flooring and a drop ceiling. The northern section of the addition was sectioned into offices by filling the historic factory windows and building stud walls. These offices also contain tiled floors and drop ceilings.

#### 2784 N 32nd Street (Parcel #309-1205)

#### Building 4 (1920):

Building 4 is located north of building 1 and east of the intersection of 32nd and Hadley Streets (Figure 7). The building is a steel and brick structure. The building contains three masses, most clearly visible from the west elevation: the main wing is a one-story, sawtooth roof building; the second wing is attached to the north of this building, and the third wing (office wing) is attached to the west, between the main wing and the street (Photographs 78 and 79). The west elevation has been entirely covered with stucco, but structural elements give an idea of the historic fenestration of the building. Today the west elevation contains only three openings: a rolling garage door in the main wing, a metal swing door in the office wing, and a rolling garage door in the north wing. The south elevation of the main wing is almost entirely made up of steel-framed factory windows. The east elevation has also been stuccoed and contains no fenestration. The roof of the main wing contains two nearly full-span shed roof skylights. The north wing contains a series of steel-framed gabled skylights. The interior of the building contains a steel skeletal system on a concrete floor.

#### 2727 N 32nd Street (Parcel #309-0502)

2727 N 32nd Street has always remained open space. In ca. 1948 a retaining wall was built along the east edge of the lot with wood poles to level the ground for use as a parking lot. Metal posts were added to reinforce the wooden retaining wall. Today the lot is largely overgrown, but existing evidence suggests that the lot was once graded and laid with gravel.

#### Integrity:

The Briggs and Stratton West Plant retains a moderately high amount of historic integrity to its period of significance (1936-1977). The plant retains its integrity of location as it continues to exist in the northern two quadrants of the intersection of Center and 32nd Streets. The plant also retains its integrity of setting as it continues to exist in an industrial corridor which runs along either side of the former Milwaukee Road. The manufacturing properties which border the property to the north and south show continued industrial activity, and the neighborhood to the west continues as a

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residential area composed primarily of single-family homes. Portions of the plant which are currently used maintain the interior setting of the property, although the integrity of the interior setting has been lost in places where the plant has become vacant.

Because the plant was assembled through acquisition and modification of previously-existing industrial properties, the Briggs and Stratton West Plant also retains integrity of design. The predominant design of the plant is expressed through its assembly, and neither the individual buildings nor the assemblage has undergone any significant modifications since the plant's period of significance. Further, many of the individual buildings and structures that constitute the plant retain their historic designs. While some modifications, such as the addition of stucco to 2784 N 32nd Street (Building 4), or the enclosure of the main entrance to 3212 W Center Street (Building 2), have diminished design integrity, other modifications like the enclosure of the courtyard at 2748 N 32nd Street (Building 1, Addition 4), and the extensive additions to 2758 N 33rd Street (Building 3), took place within the period of significance and add to the design of the plant.

The historic architectural elements, such as the multiple colors and patterns of brick and limestone, the heavy timber framing elements, and even the molded reinforced concrete demonstrate integrity of materials and workmanship. While many of the historic windows have been covered, much of the historic material remains in place. Some individual buildings have lost some of these aspects of integrity, especially where windows have been replaced, or where historic floors have been covered, or where historic ceilings have been hidden by late-twentieth century drop ceiling; but the plant as a whole retains a moderately high amount of its historical material and evidence of workman manipulation of those materials.

The plant demonstrates integrity of association through its proximity to neighboring industrial properties, to the arterial Center Street, and to the railroad. It also demonstrates this aspect of integrity through the relationships between the individual buildings on the site. Elements like the doorway cut through the northern wall of 3212 W Center Street (Building 2, Addition 1) to connect that building to 2758 N 33rd Street (Building 3, Addition 4) demonstrate the assemblage of an integrated plant and association of the plant's interior elements. The continued presence of large bay doors and loading docks signal the plant's history as a manufacturing and shipping center. Skylight elements and large expanses of windows demonstrate the building's early-twentieth century manufacturing history and the necessity of large amounts of natural light. Because the buildings have not undergone any significant changes since the plant's period of significance, it still reflects a direct association with the Briggs and Stratton Corporation and their twentieth century manufacturing enterprise. Lastly, the Briggs and Stratton West Plant exhibits integrity of feeling through its expansive manufacturing spaces flooded with natural light, through mid-century locker rooms and bathroom fixtures, through well-worn wooden floors and stair treads, and through the noises and smells of active manufacturing in the immediate vicinity.

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**Statement of Significance:** 

#### **Statement of Significance Summary Paragraph**

The Briggs & Stratton Corporation West Plant is significant under Criterion A for its industrial history related to the Briggs & Stratton Corporation for the period of 1936-1977. Briggs & Stratton began developing the site in 1936 to accommodate the expansion of its small engine production, an enterprise which led to the company becoming one of the largest manufacturers of small engines in the country, and one of the leading producers of lawn and garden equipment and air-cooled gasoline engines in the world. The West Plant is a significant example of the assemblage of a manufacturing facility through the acquisition, modification, and expansion of pre-existing industrial properties. The Briggs & Stratton Corporation West Plant is one of the last vestiges and greatest embodiment of the company in the City of Milwaukee.

#### **Developmental History**

The Briggs and Stratton Corporation (Briggs & Stratton) purchased the first property at what would become the West Plant in 1936, and between that year and 1977 the company purchased five contiguous parcels to form their second plant in the City of Milwaukee. Over the course of forty years, Briggs & Stratton would accumulate, modify, and expand existing manufacturing sites to form their industrial campus.

In January 1936, Briggs & Stratton purchased property at 2748 N 32<sup>nd</sup> Street (parcel #309-1206) from the Westinghouse Lamp Company. The building was originally designed in 1906 by Alexander C. Eschweiler and built for the Romadka Brothers Company, one of the city's largest trunk and luggage companies, in one of the leading trunk manufacturing cities in the country (Figure 9).<sup>2</sup> The Romadka Brothers Company was founded in 1848 as the Wisconsin Trunk Manufactory, the first enterprise of its kind in the city.3 In 1865, the owner, John R. Cocup died, and brothers Charles P., John M. and Anthony B. Romadka purchased the company and changed its name to the Romadka Brothers Trunk Company. By the turn of the century, the company had outgrown its Third Street location, and purchased a lot of land in northwest Milwaukee to expand their business. 4 The original 1906 plant consisted of a three-story administrative building (building 1A), a three-story factory building (building 1B) with two single story railroad shipping sheds (buildings 1C and 1D), a two-story boiler house (boiler house 1), and an approximately 140-foot-tall smoke stack (stack 1). In 1912, the Romadka Brothers Company went out of business, and the factory was purchased by the Westinghouse Lamp Company who utilized the space to manufacture electrical components until the 1930s. Westinghouse undertook a large expansion project in ca. 1920 during which they built a coal house (addition 1) onto the east side of the 1906 boiler house, and two large factory additions (additions 2A and 2B) to the north of the original factory (Figures 10 through 14). In ca. 1930, Westinghouse expanded the restroom facilities on the north side of addition 2A (addition 3) likely in preparation to lease that portion of the plant to an outside company, which they did in 1933, when the Ideal Shoe Company leased the circa-1920 factory buildings (Figure 15). The entire property was sold to Briggs & Stratton in 1936, who utilized the factory to manufacture cast iron (and later aluminum alloy) engines. Briggs & Stratton expanded the facility in 1950 by enclosing the historic courtyard, converting the space into a heat treating plant (addition 5). Around the same time, the company built three additions (additions 5, 6, and 7) to the north end of the plant to expand their shipping operation In ca. 1960, the company modernized their security by replacing the former guard house (addition 8).

<sup>&</sup>lt;sup>1</sup> Milwaukee County Register of Deeds, Deed #2069717. See also "Factory Here Buys Building for Expansion", *Milwaukee Journal*, 30 Nov 1935.

<sup>&</sup>lt;sup>2</sup> Miloslav Rechcigl, Jr. *Czech American Timeline: Chronology of Milestones in the History of Czechs*. (Bloomington, IN: AuthorHouse, LLC, 2013), 61.

<sup>&</sup>lt;sup>3</sup> "Centers of Industry: Milwaukee and Racine—Greatest Trunk District of the West", *Trunks, Leather Goods and Umbrellas: A Journal of Information for the Trade*, Vol. 24, July 1909 (Philadelphia: Perry L. Smith, 1909), 106.

<sup>&</sup>lt;sup>4</sup> Frank L. Flower, *History of Milwaukee, Wisconsin*, Vol. 1, (Chicago: The Western Historical Company, 1881), 1447.

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In 1948, Briggs and Stratton purchased a second property at 2727 N 32<sup>nd</sup> Street (parcel #309-0502), directly across the street to the west of the plant for use as a parking lot (Figure 16). The company built a retaining wall, graded, and graveled the lot.

On June 2, 1950, Briggs and Stratton purchased the building at 3212 W Center Street (parcel #309-1208) from the Harley Davidson Motor Company for use as its "service and distribution warehouse and headquarters." This facility functioned as a highly modernized warehouse, and was primarily used for stocking, packaging and shipping replacement parts, and was "one of the first of its kind in the country." This building (building 2) had originally been built in 1920 for the Columbia Knitting and Manufacturing Company, who sold the property to the Holeproof Hosiery Company in 1926. That company, in turn, sold the property to the Harley Davidson Motor Company in February 1942. They built a single-story trucking and distribution addition (building 2, addition 1) to the rear of the building in 1946 (Figure 17). Harley Davidson only occupied the building for eight years, and sold the property to Briggs & Stratton in 1950. Briggs & Stratton modernized the building for their purposes, and after they purchased the neighboring property (2758 N 33rd Street) in 1972, they cut a door through the northern wall of the addition to join the two properties.

Briggs and Stratton purchased the third property (parcel #309-0503) of the West Plant in September 1972 from Milsco Manufacturing Company (2758 N 33rd Street).9 The building was originally built in 1925 for the Albert H. Weinbrenner Shoe Company for the manufacture of leather shoes and boots. 10 Albert began his shoe company in the back of his father's cobbler shop in the 1880s, and in 1892 he partnered with Joseph Pfeifer to open a store on Milwaukee's Water Street called Weinbrenner and Pfeiffer. 11 Weinbrenner expanded his operation and opened his first factory in 1900 and business boomed. By 1919, the Weinbrenner Shoe Company already had five factories, and in 1925 Weinbrenner purchased the lot at 2758 N 33<sup>rd</sup> Street for another. 12 The original 1925 construction included the three-story factory building (building 3), twostory boiler house (boiler house 2), and approximately 120 foot tall smoke stack (stack 2). In ca. 1930, the company nearly doubled the size of their operation by building a two-story addition (building 3, addition 1). In 1942, the Weinbrenner Shoe Company sold its property to Milwaukee Saddlery Company, a leather harness, collar, and accessory company. 13 Milwaukee Saddlery was formed in 1924 and found moderate success in the agricultural market before they were approached by Harley Davidson Motor Company to create an upholstered two person "buddy" seat for their motorcycles in 1934.14 The partnership was instantly successful, and Milwaukee Saddlery expanded its business and in 1937 moved to a new factory on 32<sup>nd</sup> Street (one block south of the new Briggs & Stratton West Plant) to serve the needs of its newly expanded business. In 1942, the same year Harley Davidson purchased 3212 W Center Street, Milwaukee Saddlery purchased the former Weinbrenner Shoe Company factory; and in 1948, to reflect their transition from horse tackle to automotive parts, they officially reincorporated as Milsco Manufacturing Company. 15 Milsco Manufacturing largely expanded the factory: in ca. 1942 it enclosed the first story of the courtyard to further integrate the two wings, in ca. 1948, the company extended the two-story wing to the south to increase production space (building 3, addition 3), in 1956 it built a new distribution facility to the south of the circa-1948 wing (building 3, addition 4), and in 1959, the company modernized its office space by building a one-story wrap-around addition to the west façade of the original 1925 factory building (Figure 18). In 1972 Milsco Manufacturing moved its production facility to a larger plant in the Milwaukee suburb of Brown Deer,

<sup>&</sup>lt;sup>5</sup> Milwaukee County Register of Deeds, Book 2750, Page 343.

<sup>&</sup>lt;sup>6</sup> Jeffrey L. Rodengen, The Legend of Briggs & Stratton, (Fort Lauderdale, Florida: Write Stuff Syndicate, 1995), 106.

<sup>&</sup>lt;sup>7</sup> Milwaukee County Register of Deeds, Deed #7358198

<sup>&</sup>lt;sup>8</sup> Milwaukee County Register of Deeds, Deed #2943792

<sup>&</sup>lt;sup>9</sup> Milwaukee County Register of Deeds, Book 678, Page 1012.

<sup>&</sup>lt;sup>10</sup> Sanborn Map Company of New York, "Insurance Maps of Milwaukee, WI (Last Updated 1926)" Sanborn Fire Insurance Maps. (New York: Sanborn Map Company, 1910), 138.

<sup>&</sup>lt;sup>11</sup> Weinbrenner Shoe Company, "A Sole-Mater in Manufacturing: Weinbrenner Shoe Company, "The Thorogood Story." Available from: http://www.weinbrennerusa.com/ourHistory.cfm

<sup>&</sup>lt;sup>12</sup> Michael Golombek, "A Solid Footing," *Business in Focus*, June 2015. (Halifax, Nova Scotia: Focus Media Group, 2015), 258. Available from: http://www.businessinfocusmagazine.com/e\_mag/BIFNAJun2015/

<sup>&</sup>lt;sup>13</sup> Milsco Manufacturing Company. "The History of Milsco" Available from: http://www.promekseats.com/history.html

<sup>&</sup>lt;sup>14</sup> Ibid.

<sup>15</sup> Ibid.

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Wisconsin, and sold the 33<sup>rd</sup> Street plant to Briggs & Stratton. Briggs & Stratton made few modifications to the Milsco plant; most notably they cut a door between the southern-most addition and the 3212 W Center Street addition which merged the two plants into one continuous building.

In 1976 as part of an exchange for the land on which the East Plant was located, Briggs & Stratton acquired the fifth and final property of its West Campus, 2784 N 32<sup>nd</sup> Street (parcel #309-1205) from Milwaukee Reliance Boiler Works. <sup>16</sup> Milwaukee Reliance Boiler Works was incorporated by John E. and William Sharp in 1909. <sup>17</sup> The factory was built in 1920 and continued its operation at that site until 1977 when it traded the 32<sup>nd</sup> Street property for the former Briggs & Stratton East Plant site (demolished 1976). Briggs & Stratton only operated at the site for nine years, and during that time primarily used the 2784 N 32<sup>nd</sup> Street property as warehouse space. The company made very few alterations to the property after the plant's completion in 1977, instead investing its resources in the expansion of its Burleigh Plant in Wauwatosa. Following a 1986 expansion to the Burleigh Plant, the West Plant became redundant and was closed. The property was subsequently sold the following April. <sup>18</sup>

#### **Narrative Statement of Significance**

#### **National Register Criterion A: Industrial Significance**

The Briggs & Stratton West Plant was assembled between 1936 and 1977 and represents the transition and expansion of the company from its focus on automobile assembly and automobile part manufacturing to small engine innovation and production. Milwaukee is one of the leading industrial centers of the late-nineteenth and early-twentieth century America. The city's metal foundries began to flourish as early as 1842, which lead to the development of Milwaukee's mechanical industries, including the production of large and small engines, machinery, and electrical appliances. By the 1910s the city was heavily involved in the production of automobile parts; although never a prominent center of automobile assembly, as the Detroit-based Ford Motor Company lead the nation, a number of Milwaukee's general manufacturers produced parts necessary to sustain the enterprise. By the end of World War I, Milwaukee had established itself as an international leader in the manufacturing of tractors, milling and farm implements. While Briggs & Stratton had become a leading producer in automobile ignitions, switches, and locks by the 1920s, the West Plant represents the period during which the company became one of the nation's largest manufacturer of small gasoline engines. As the company's East Plant (built between 1917 and 1920) was demolished in 1976, the West Plant remains the sole facility associated with the company's rise to dominance in the City of Milwaukee.

Stephen F. Briggs was born in the Dakota Territory in 1885, the son of Stephen A. Briggs, insurance agent and tailor and Flora (Foster) Briggs. From an early age Briggs showed an aptitude for mechanics. He attended South Dakota State College where Bill Juneau, coach of the college's football team, learned of Briggs's talent for mechanical engineering and introduced him to Harold M. Stratton, a local grain merchant. In 1908, a year after Briggs graduated from college, Briggs and Stratton entered into business together, hoping to break into the booming automobile market. They opened a modest shop in rented space on the third floor of the Feister-Owen Press Building at the corner of Milwaukee and Buffalo Streets in Milwaukee's Third Ward.<sup>21</sup> The company's first ventures were in the automobile assembly business, but they quickly found that they were not able to compete with larger, more established companies. Their first projects all proved too costly for mass-

<sup>&</sup>lt;sup>16</sup> Briggs and Stratton Corporation, *The History of Briggs & Stratton Corporation*. Pamphlet. On file at Milwaukee County Historical Society, File MSS-0764. Wawautosa: Np., Nd. (ca. 1979)

<sup>&</sup>lt;sup>17</sup> William George Bruce, *The History of Milwaukee City and County,* volume 2. (Chicago: S.J. Clarke Publishing Co., 1922), 752.

<sup>&</sup>lt;sup>18</sup> Milwaukee County Register of Deeds, Deed #6048490

<sup>&</sup>lt;sup>19</sup> Mead & Hunt, *Milwaukee Industrial Properties Intensive Survey,* (Madison: Wisconsin Historical Society, 2016), 17. Available from: https://www.wisconsinhistory.org/pdfs/hp/Milwaukee-Industrial-Intensive-Survey.pdf <sup>20</sup> Ibid.. 29.

<sup>&</sup>lt;sup>21</sup> Briggs and Stratton Corporation, *The History of Briggs & Stratton Corporation*. Pamphlet. On file at Milwaukee County Historical Society, File MSS-0764. Wawautosa: Np., Nd. (ca. 1984)

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production. Through the process, Briggs had developed a revolutionary ignition system to replace the magneto, a product which he patented in 1909 and exhibited at the New York Auto Show in 1910.<sup>22</sup>

Out of money and driven by demand for the new igniters, the company was forced to switch its focus from automobile assembly to the manufacturing of automobile parts. The company was incorporated in 1910 and expanded their enterprise to produce a variety of automobile parts, including die-cast gasoline engine igniters and automobile locks. Although Briggs & Stratton had not succeeded in manufacturing an automobile for mass-production, it had revolutionized the automobile industry, and by 1920, the company was the leading producer of starting mechanisms in the country, and by 1929, the world.<sup>23</sup>

In 1914, Briggs & Stratton expanded by leasing out the fourth floor of the Feister-Owen Press Building, and in 1915 they offered to lease the entire building and add a fifth floor, but negotiations fell through and they began drafting plans for a new facility.<sup>24</sup> The company's new building was to consist of two five-story buildings located at the corner of 13<sup>th</sup> and Center Streets. Briggs & Stratton moved into their new building in 1917, before the building was completed (the first building was completed in 1918 and the second in 1920.)

Although the company was becoming massively successful in the automobile parts industry, they continued to experiment and innovate. In 1919 the company acquired the exclusive rights to the A.O. Smith Motor Wheel, a flywheel motor which saw its main application in motorized bicycles. That same year, Briggs and his engineers created a working prototype of a stationary small engine, modeled after the Motor Wheel.<sup>25</sup> By the following year, Briggs & Stratton had introduced the "Type P" engine. The stationary small engine had a wide range of applications, from garden tractors and cultivators, to harvesting and milling machines. The company produced the first self-contained home electric refrigerator, but as there was no market demand (as the majority of Americans did not have access to electricity), the product failed.<sup>26</sup> Undeterred, Briggs & Stratton modified the engine for wider applications, resulting in the development and production of twelve different engine models between 1925 and 1930.<sup>27</sup>

During the 1920s and 1930s the vast majority of American farmers were without electricity; the Rural Electrification Act wasn't passed until 1936, and many farms throughout the Midwest were not electrified until after World War II. Recognizing his market, Briggs sought to create a line of products aimed at improving the lives of the 85% of farmers without electricity, ranging from tractors and corn huskers, to water pumps and electrical generators.<sup>28</sup> The most lucrative product for Briggs & Stratton was the gasoline-powered washing machine.

By 1930, Briggs & Stratton was producing an average of 500 engines per day, and it was becoming clear to Stephen Briggs that the company would need to expand to remain efficient and productive. In 1930, in the height of the Great Depression, Briggs & Stratton expanded by constructing a sixth floor to both of their buildings at 13<sup>th</sup> and Center Streets, and in 1934 built a new testing laboratory.<sup>29</sup> The company's product diversification and the success of the gasoline-powered washing machine required even more production space, and in 1936 Briggs & Stratton purchased the former Westinghouse Lamp Factory at 2748 N 32<sup>nd</sup> Street, which quickly became known as the West Plant. The new factory space became the primary facility for the manufacturing of cast iron engines, while the East Plant (as it had become known) retained the majority of the company's automobile parts assembly.

Following World War II as Americans were moving from the cities to the suburbs, Briggs & Stratton recognized the growing market for rotary lawn mowers. The company had been working on making lawn mowers more accessible since the 1930s,

<sup>&</sup>lt;sup>22</sup> Briggs and Stratton Corporation, ca. 1979

<sup>&</sup>lt;sup>23</sup> Ibid.

<sup>&</sup>lt;sup>24</sup> Rodengen, 22-23.

<sup>&</sup>lt;sup>25</sup> It's likely that Briggs had the idea for the stationary engine in mind when he purchased the rights to the Motor Wheel.

<sup>&</sup>lt;sup>26</sup> Briggs and Stratton Corporation, ca. 1979

<sup>&</sup>lt;sup>27</sup> Rodengen, 42.

<sup>&</sup>lt;sup>28</sup> Ibid., 67.

<sup>&</sup>lt;sup>29</sup> Briggs and Stratton Corporation, ca. 1979., and Rodengen 79.

Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

and in 1938 they had developed the "Lawn Mower Pusher," a predecessor to the self-propelled push mower.<sup>30</sup> Between 1930 and 1945, lawn mower engines averaged approximately four percent of the company's total sales, but in 1946 sales of lawn mower engines leapt to 31 percent of total business.<sup>31</sup> The company again revolutionized the market in 1953 with the development of the aluminum-alloy engine. Traditional cast iron engines were both too heavy and too expensive, but the new aluminum-alloy engine made rotary lawn mowers accessible to more Americans. Throughout the 1950s, Briggs and Stratton produced an average of over two million engines per year.<sup>32</sup>

The new production demand required the company to re-evaluate its production facilities. The company's East Plant retained most of the company's ignition systems and automobile lock assemblies, and in 1945 the company built a new office annex along Center Street. Briggs & Stratton renovated their West Plant property in the 1950s, constructing a heat treating plant addition, and constructing new shipping facilities. In 1950, the company purchased additional property at the West Plant to serve as the company's service and distribution headquarters, but it was becoming clear that the company required more space to meet demand. In 1954, the company announced plans for construction of a new plant on an 82-acre site in Wauwatosa.<sup>33</sup> Completed in 1955, the Burleigh Plant (so named because it was located on Burleigh Street), became the primarily production site for the aluminum engine production lines. This plant was expanded in 1958. In 1967, a second addition nearly doubled the size of the Burleigh Plant, and the company moved their corporate offices from Milwaukee.

During the 1970s and 1980s, Briggs & Stratton continued to be a national leader in outdoor power equipment, but the changing retail market forced the company to reorganize. To remain competitive amongst powerful mass retailers, Briggs & Stratton had to expand its production. In the 1970s, the company purchased two separate foundry sites in West Allis to meet the specialized casting needs of their expanding catalog of engines. In 1973, the East Plant was deemed obsolete, and the company purchased a factory and relocated the East Plant production lines to Glendale. <sup>34</sup> In 1977, the company purchased property outside of Milwaukee County for the first time since its formation when it purchased a plant in Perry, Georgia for the production of locks and lock parts. Throughout the 1980s, the company established product-focused facilities in Kentucky, Alabama, and Missouri. <sup>35</sup> By 1986, the West Plant had become redundant, and was closed.

#### Additional Historic Context Information: Alexander C. Eschweiler

Alexander Chadbourne Eschweiler was born in Boston in 1865. His father, Carl Eschweiler, was named head of the Calumet Heckler Mining Company, and moved the family to Houghton, Michigan Alexander attended Marquette College for a year before transferring to Cornell University where he earned his degree in architecture. He worked for a number of notable Milwaukee architecture firms before opening his own firm in 1892. His early residential commissions created a client base which led to higher profile projects, mostly of educational and religious buildings. His relationship with the Romadka family (he had designed a barn for Clement Romadka's residence in 1905), led to his commission for the new Romadka Brothers Trunk Company factory.

Eschweiler was a prolific Milwaukee architect, probably best known for his designs of the Milwaukee Gas Light Building (Wisconsin Gas Building), the Milwaukee-Downer Quad, the Charles Allis House (Charles Allis Art Museum), and the

<sup>&</sup>lt;sup>30</sup> Rodengen, 82.

<sup>&</sup>lt;sup>31</sup> Ibid., 96.

<sup>&</sup>lt;sup>32</sup> Briggs and Stratton Corporation, "The History of Briggs & Stratton" Pamphlet. (Wauwatosa, Np., 2004), 3.

<sup>&</sup>lt;sup>33</sup> "Briggs & Stratton to Build New \$5,000,000 Factory" Milwaukee Sentinel, 18 March 1954.

<sup>&</sup>lt;sup>34</sup> Rodengen, 128.

<sup>&</sup>lt;sup>35</sup> Briggs and Stratton Corporation, "Our First 100 Years: The History of Briggs and Stratton" Pamphlet. (Wauwatosa, np., 2008), 8.

<sup>&</sup>lt;sup>36</sup> David O'Keefe, "An Introduction to Alexander C. Eschweiler," *Alexander Eschweiler in Milwaukee: Celebrating a Rich Architectural Heritage.* Win Thrall, editor. (Milwaukee: Charles Allis Art Museum, 2007), 5-8. See also: "An Era of Eschweilers," *Milwaukee Magazine*, September 1968.

Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Wedhams Gas Station buildings. His residences were often designed in the English Tudor Revival Style, but he was well

versed in the Neo-Gothic Style, and the Art Deco Style.37

<sup>&</sup>lt;sup>37</sup> Mrs. David Whitmore, "Eschweiler Thematic Resources of Marathon County," National Register of Historic Places Nomination Form. (Washington D.C.: National Park Service, 1979).

Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 1: NOT USED

Figure 2: National Register Boundary



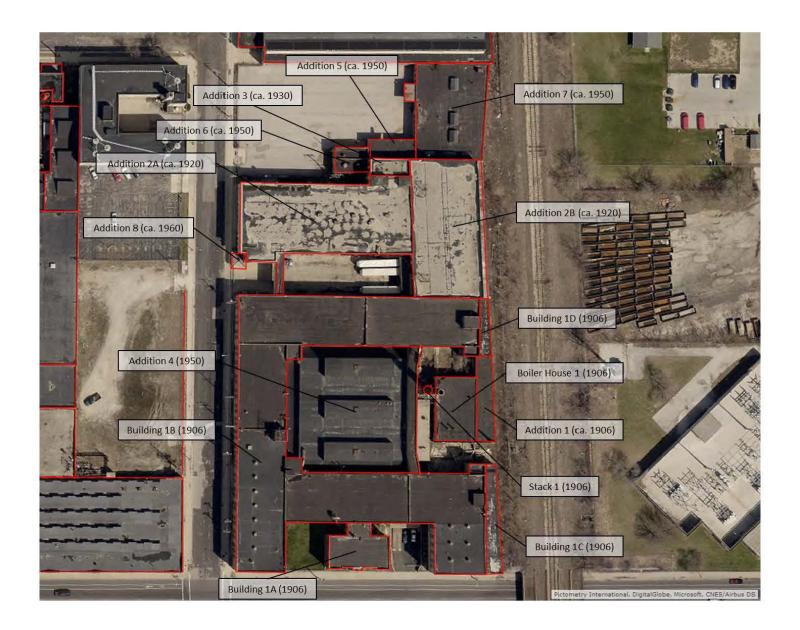
Property name: Briggs and Stratton Industrial Campus NPS Project Number

Figure 3: Milwaukee County Parcel Map



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Figure 4: 2748 N 32<sup>nd</sup> Street (Parcel #309-0501), Site Map



Property name: Briggs and Stratton Industrial Campus NPS Project Number

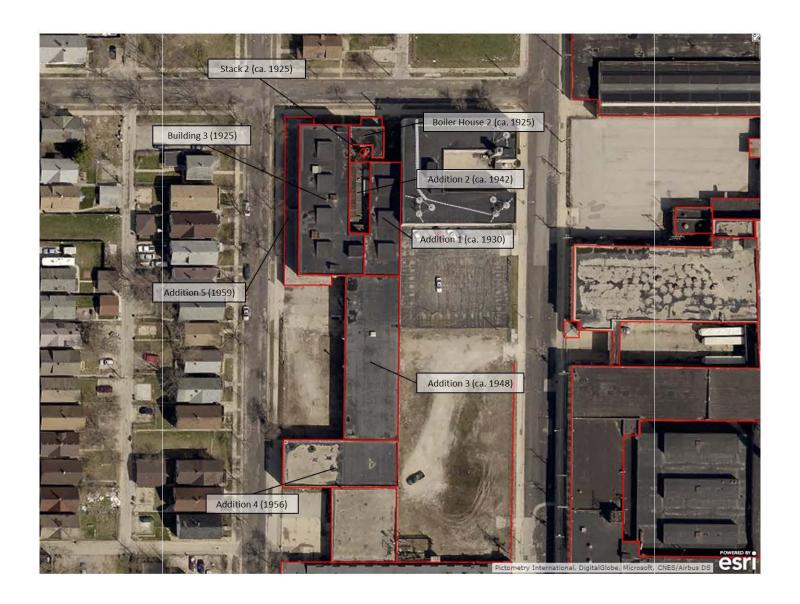
Figure 5: 3212 W Center Street (Parcel #309-1205), Site Map



Property name: Briggs and Stratton Industrial Campus NPS Project Number

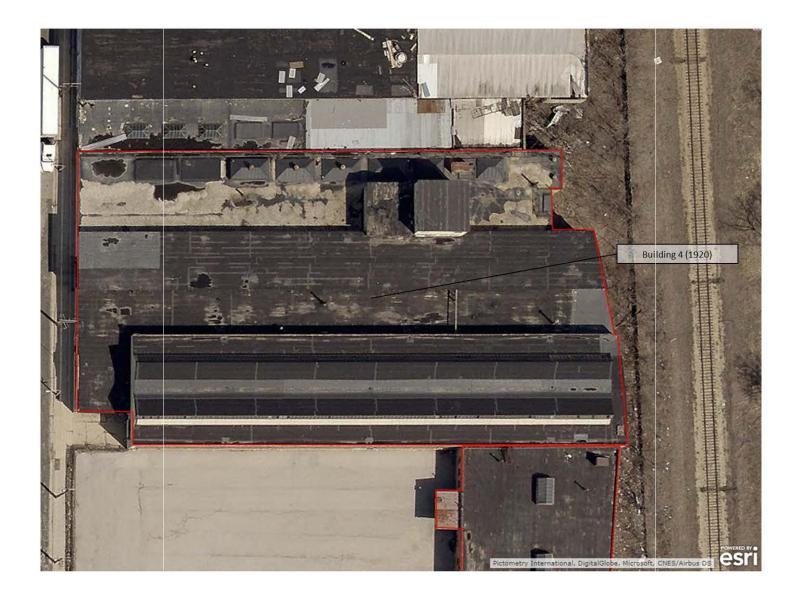
Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 6: 2758 N 33rd Street (Parcel #309-0503), Site Map



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Figure 7: 2784 N 32nd Street (Parcel #309-1205), Site Map



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Figure 8: Briggs and Stratton Corporation Plant Development History

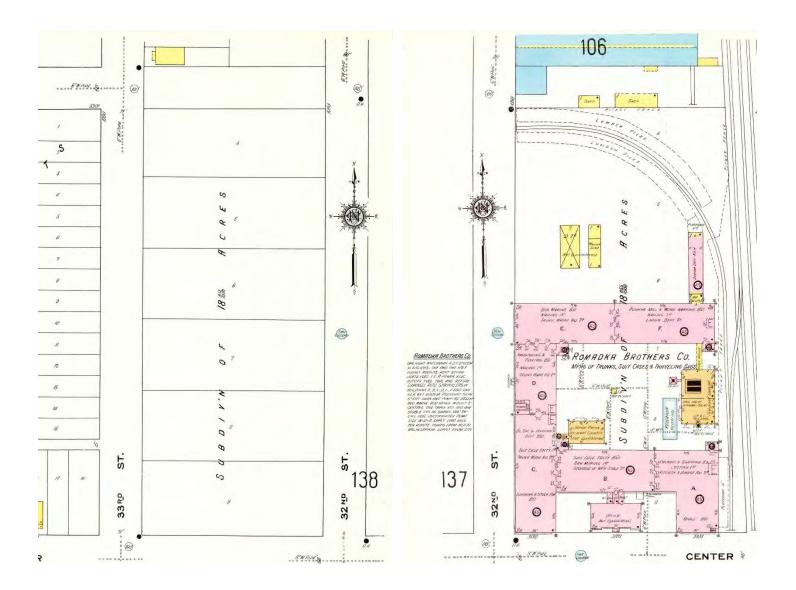


Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

#### Figure 9: 1910 Sanborn Map

Sanborn Map Company of New York, "Insurance Maps of Milwaukee, WI," *Sanborn Fire Insurance Maps*, (New York: Sanborn Map Company, 1910), pp.137-138.



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

#### Figure 10: 1921 Aerial Photograph

Albert F. Toepfer Aerial Photographer, "Neg. #1244: Toepfer-Westinghouse Lamp Co.," Photograph, June 1921. On file at the Milwaukee County Historical Society.

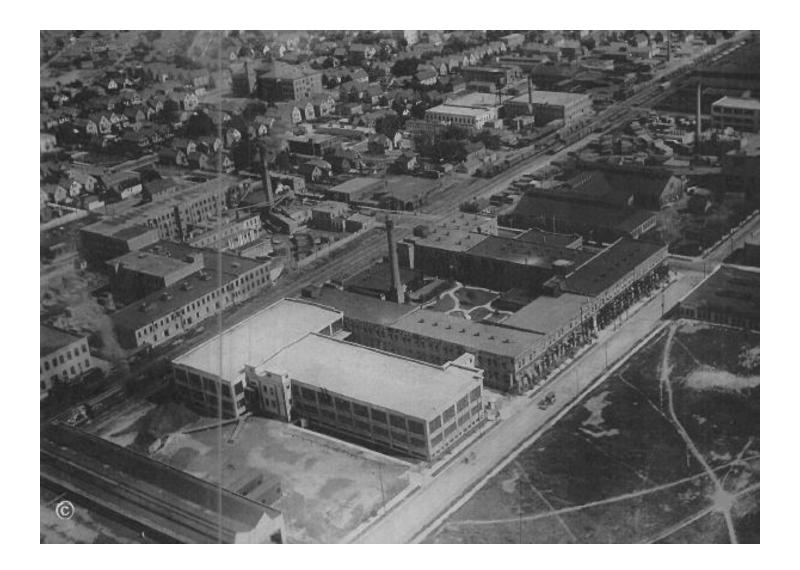


Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

#### Figure 11: 1921 Aerial Photograph

Albert F. Toepfer Aerial Photographer, "Neg. #1245: Toepfer-Westinghouse Lamp Co.," Photograph, June 1921. On file at the Milwaukee County Historical Society.

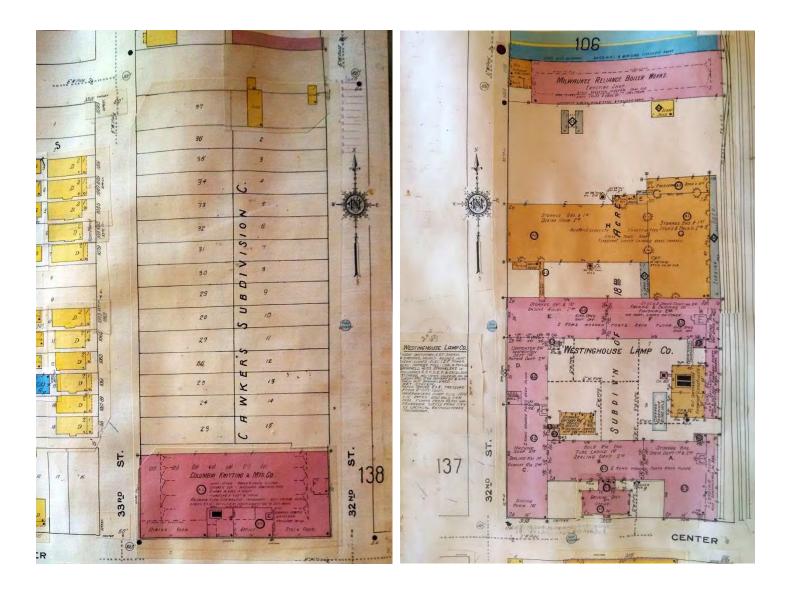


Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

#### Figure 12: 1910 Sanborn Map (Last Updated 1926)

Sanborn Map Company of New York, "Insurance Maps of Milwaukee, WI (Last Updated 1926)," *Sanborn Fire Insurance Maps*, (New York: Sanborn Map Company, 1910), pp. 137-138.



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

#### Figure 13: 1930 Aerial Photograph

Fairchild Aerial Surveys, Inc. "Airview 58275: Westinghouse, Milwaukee, Wis," Photograph, June 1930. On file at the Milwaukee County Historical Society.



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 14: Historic Photograph, ca. 1930

"Westinghouse Lamp Co. Property," Photograph, January n.d. On file at the Milwaukee County Historical Society.



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 15: Historic Photograph, ca. 1930

"North Building, 2748 N. 32<sup>nd</sup> Street: Westinghouse Lamp Company," Photograph, ca. 1932. On file at the Milwaukee County Historical Society



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

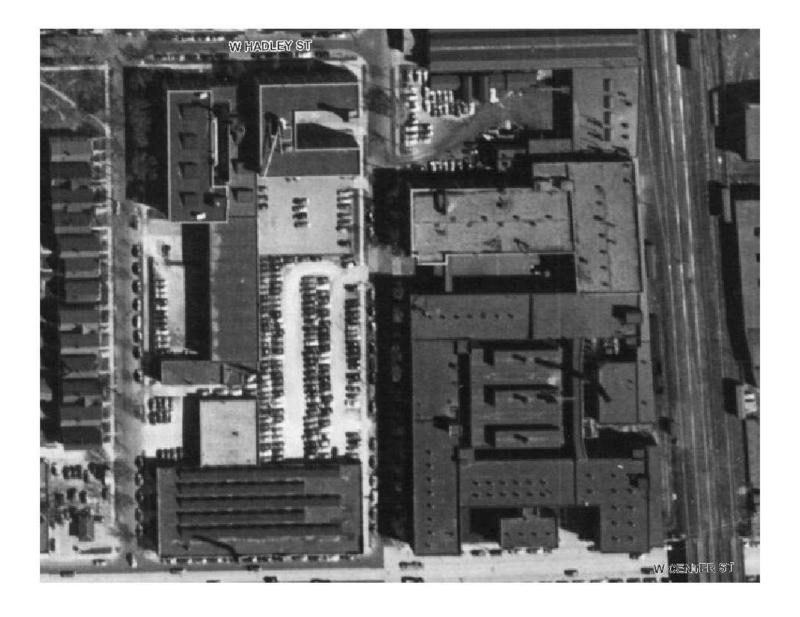
Figure 16: 1937 Aerial



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 17: 1951 Aerial

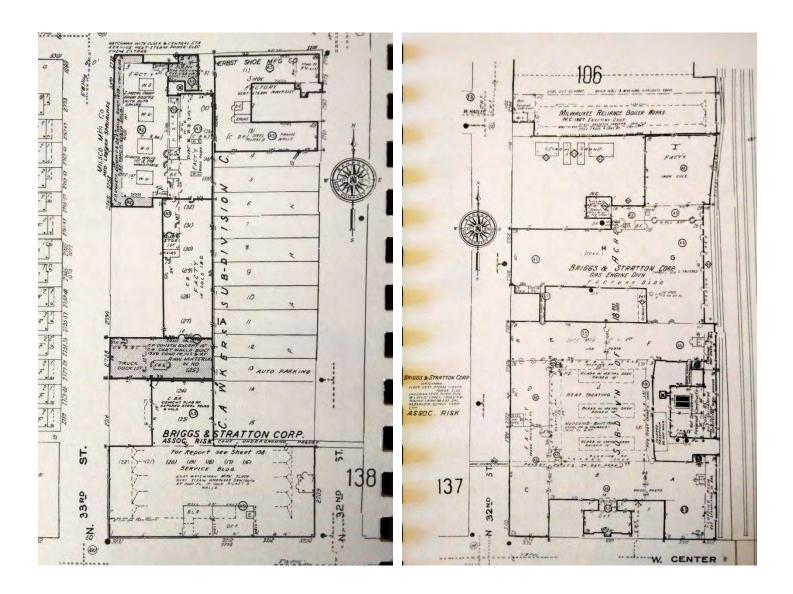


Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

#### Figure 18: 1910 Sanborn Map, Last Updated 1961

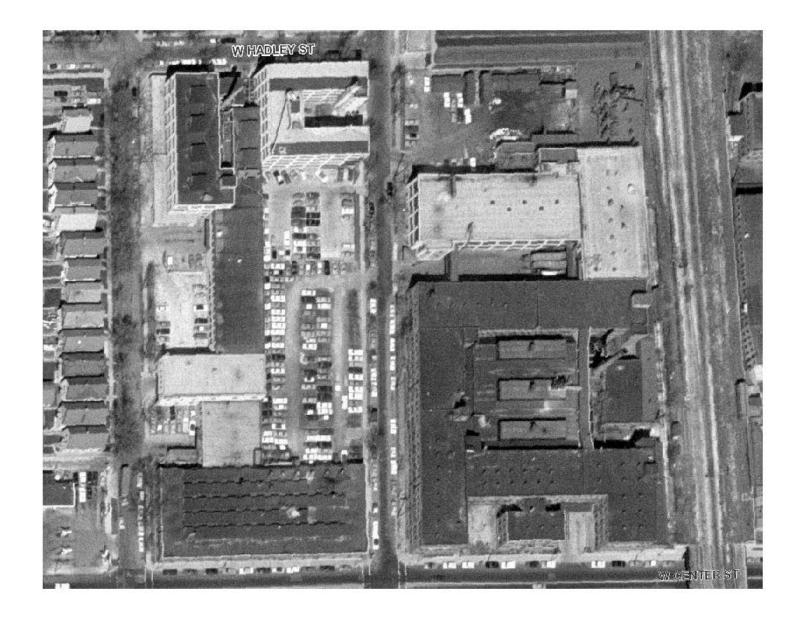
Sanborn Map Company of New York, "Insurance Maps of Milwaukee, WI (Last Updated 1961)," *Sanborn Fire Insurance Maps*, (New York: Sanborn Map Company, 1910), pp. 137-138.



Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 19: 1967 Aerial

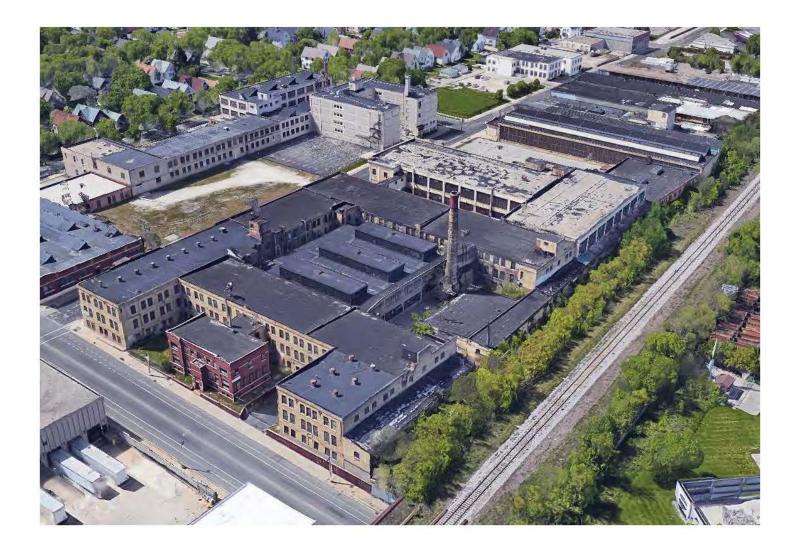


# Briggs and Stratton Industrial Campus HISTORIC PRESERVATION CERTIFICATION APPLICATION PART 1 – EVALUATION OF SIGNIFICANCE

Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 20:



# Briggs and Stratton Industrial Campus HISTORIC PRESERVATION CERTIFICATION APPLICATION PART 1 – EVALUATION OF SIGNIFICANCE

Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

Figure 21:



# Briggs and Stratton Industrial Campus HISTORIC PRESERVATION CERTIFICATION APPLICATION PART 1 – EVALUATION OF SIGNIFICANCE

Property name: Briggs and Stratton Industrial Campus NPS Project Number

Property address: 2758 N. 33<sup>rd</sup> St., 3212 West Center St., 2748 N. 32<sup>nd</sup> St., Milwaukee, WI 53210

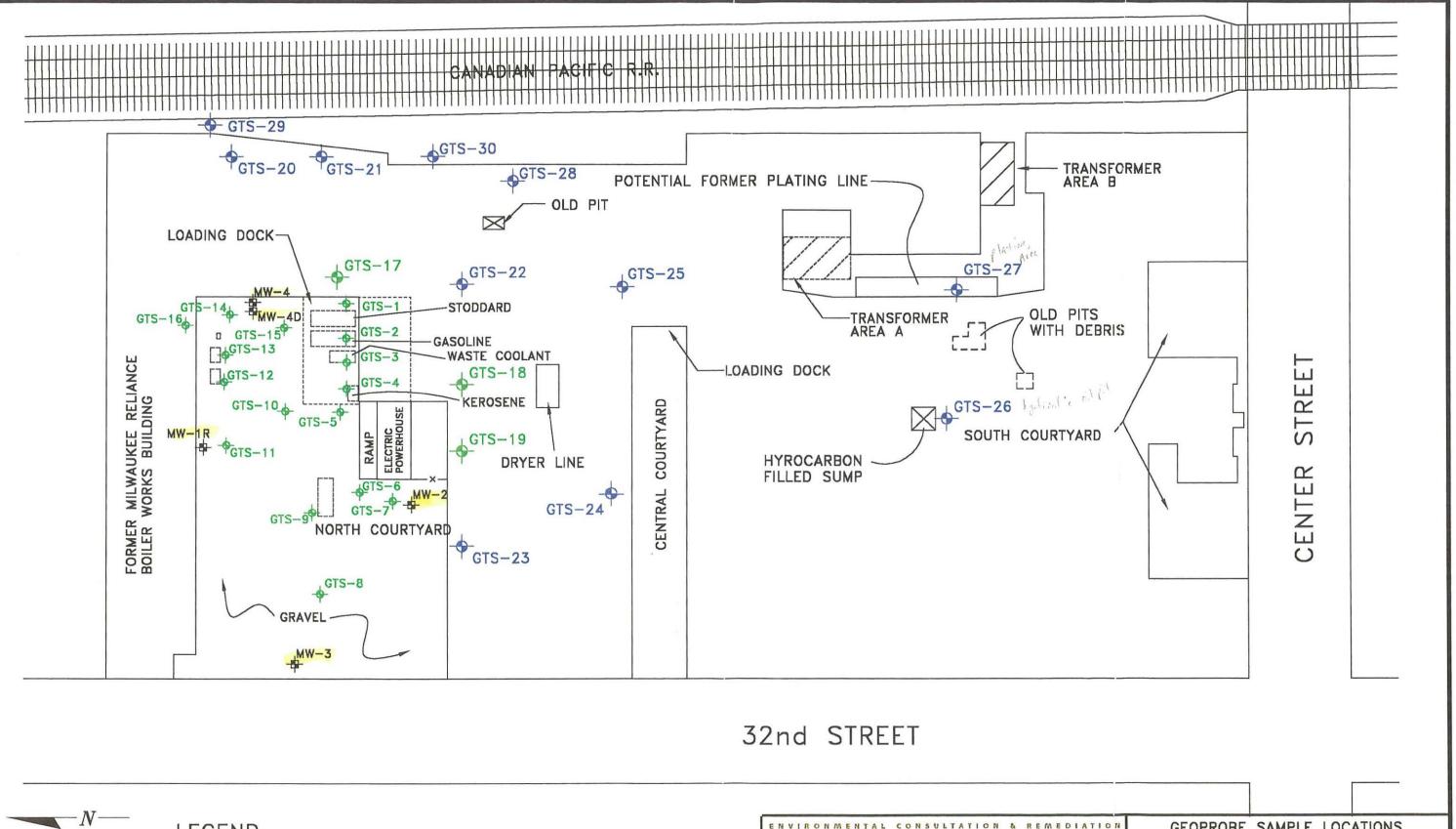
Figure 22:



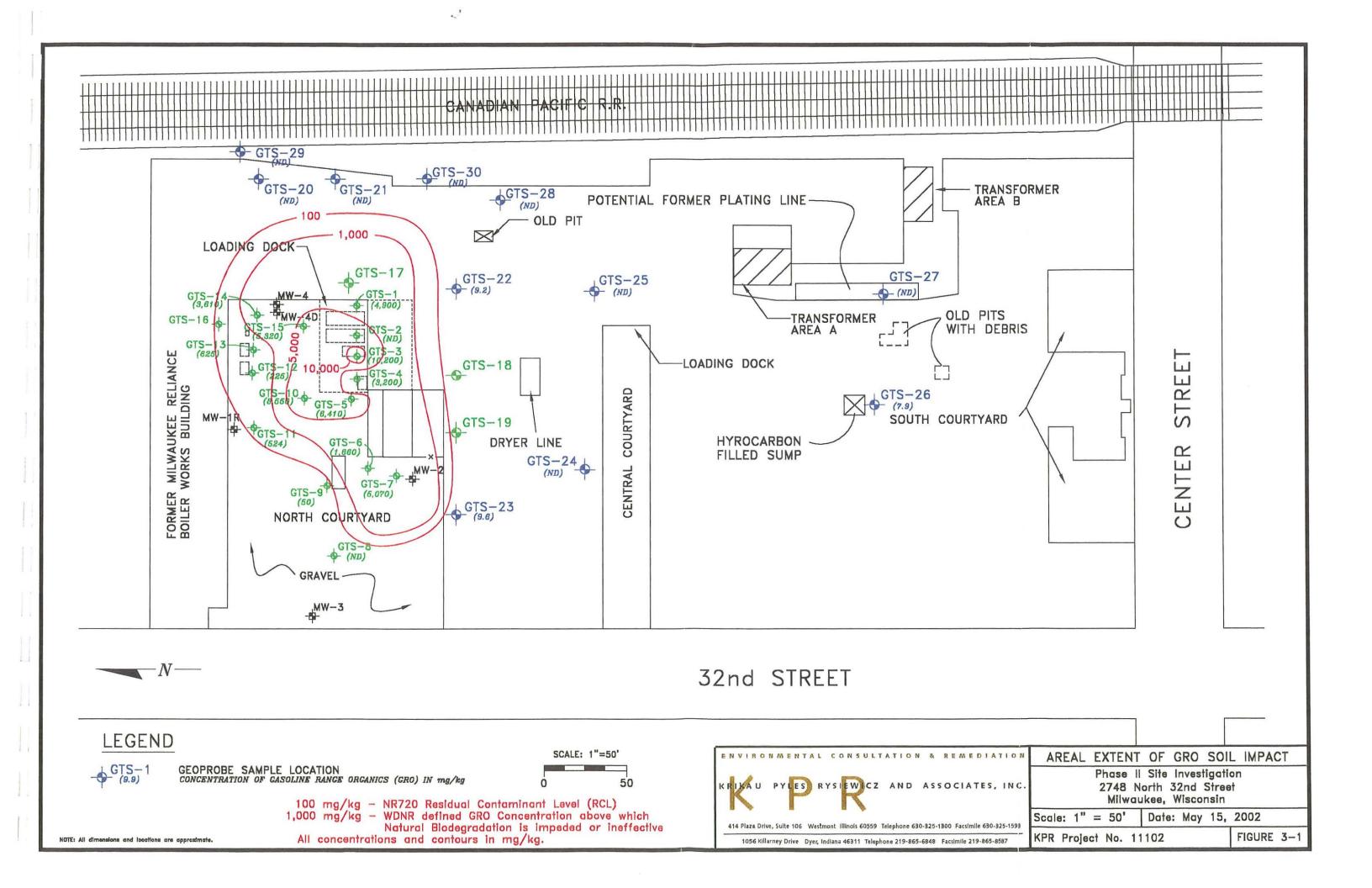
### APPENDIX B

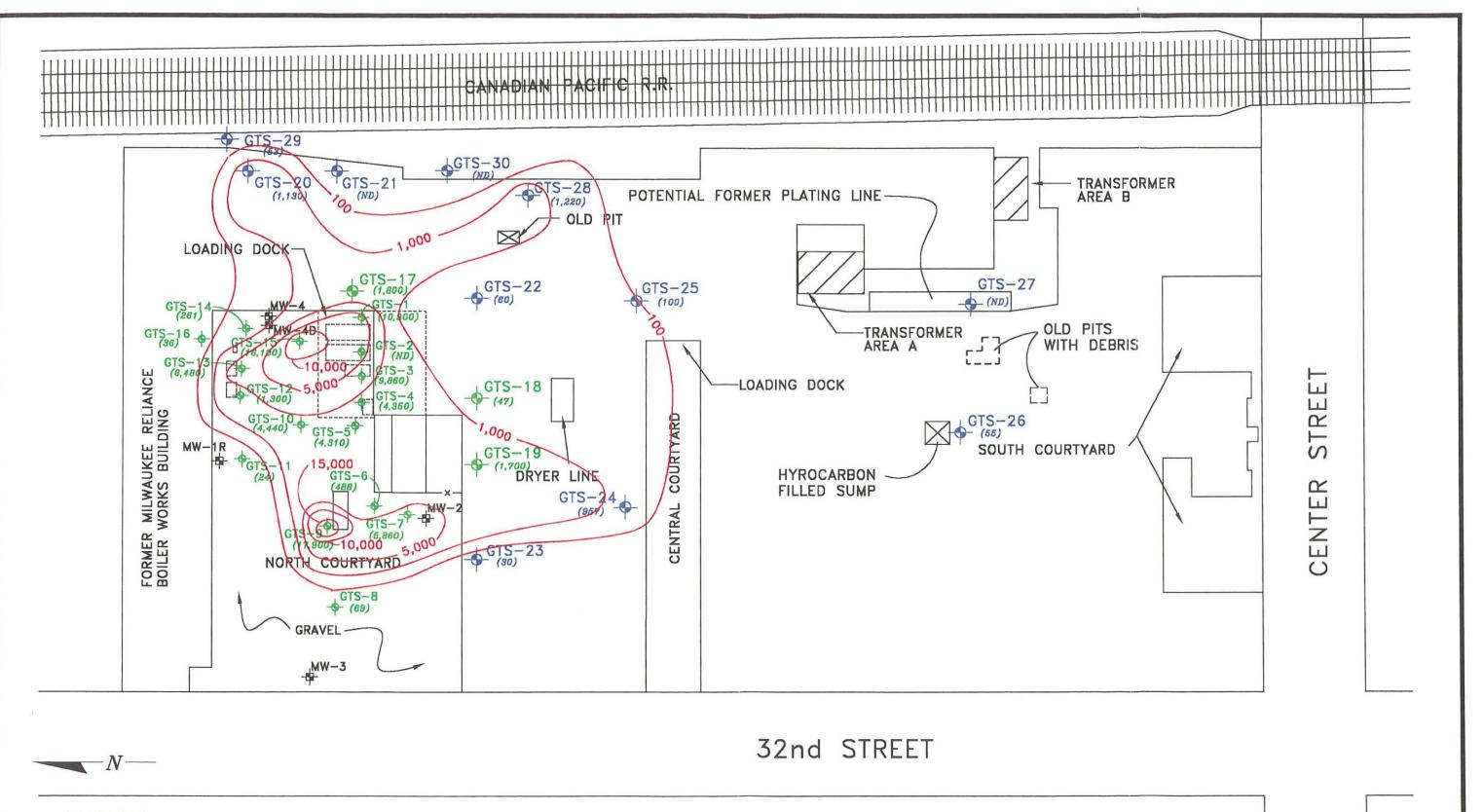
03-41-000793 Jonas Construction - Closed LUST







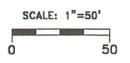




LEGEND

GTS-1

GEOPROBE SAMPLE LOCATION CONCENTRATION OF DIESEL RANGE ORGANICS (DRO) IN mg/kg



100 mg/kg — NR720 Residual Contaminant Level (RCL)

1,000 mg/kg — WDNR defined DRO Concentration above which
Natural Biodegradation is impeded or ineffective
All concentrations and contours in mg/kg.



414 Plaza Drive, Suite 106 Westmont Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1591

1056 Killarney Drive D, or, Indiana 46311 Telephone 219-865-6848 Facsimile 219-865-8887

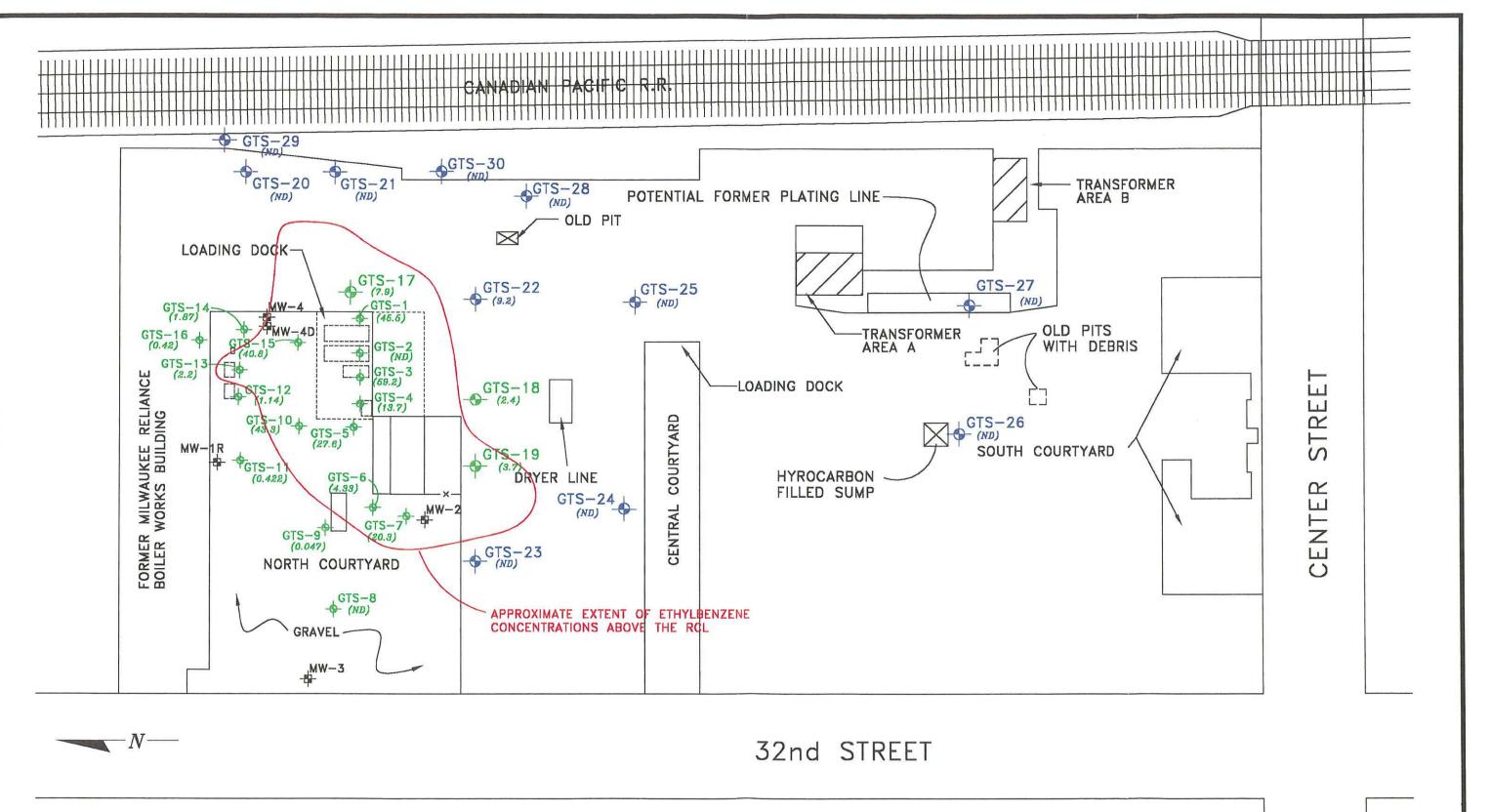
AREAL EXTENT OF DRO SOIL IMPACT

Phase II Site Investigation 2748 North 32nd Street Milwaukee, Wisconsin

Scale: 1" = 50' Date: May 15, 2002

KPR Project No. 11102 FIGURE 3-2

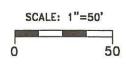
NOTE: All dimensions and locations are approximate.



LEGEND

GTS- (9.9)

GEOPROBE SAMPLE LOCATION CONCENTRATION OF ETHYLBENZENE IN mg/kg



2.9 mg/kg — NR720 Residual Contaminant Level (RCL) All concentrations and contours in mg/kg.



414 Plaza Drive, Sulte 106 Wesłmont Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

1056 Killarney Drive Dyer, Indiana 46311 Telephone 219-865-6848 Facsimile 219-865-8587

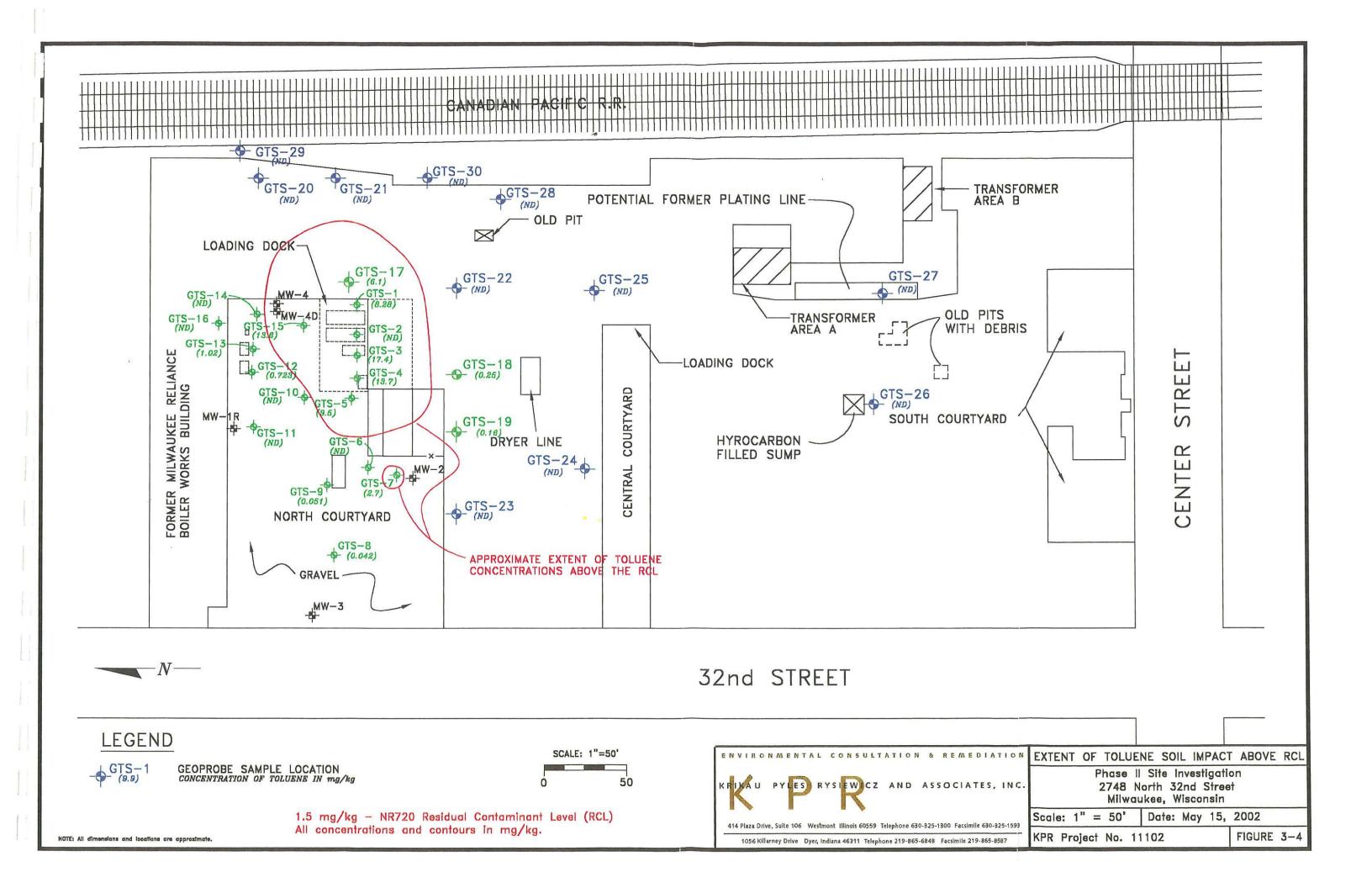
EXTENT OF ETHYLBEZENE SOIL IMPACT ABOVE RCL
Phase II Site Investigation

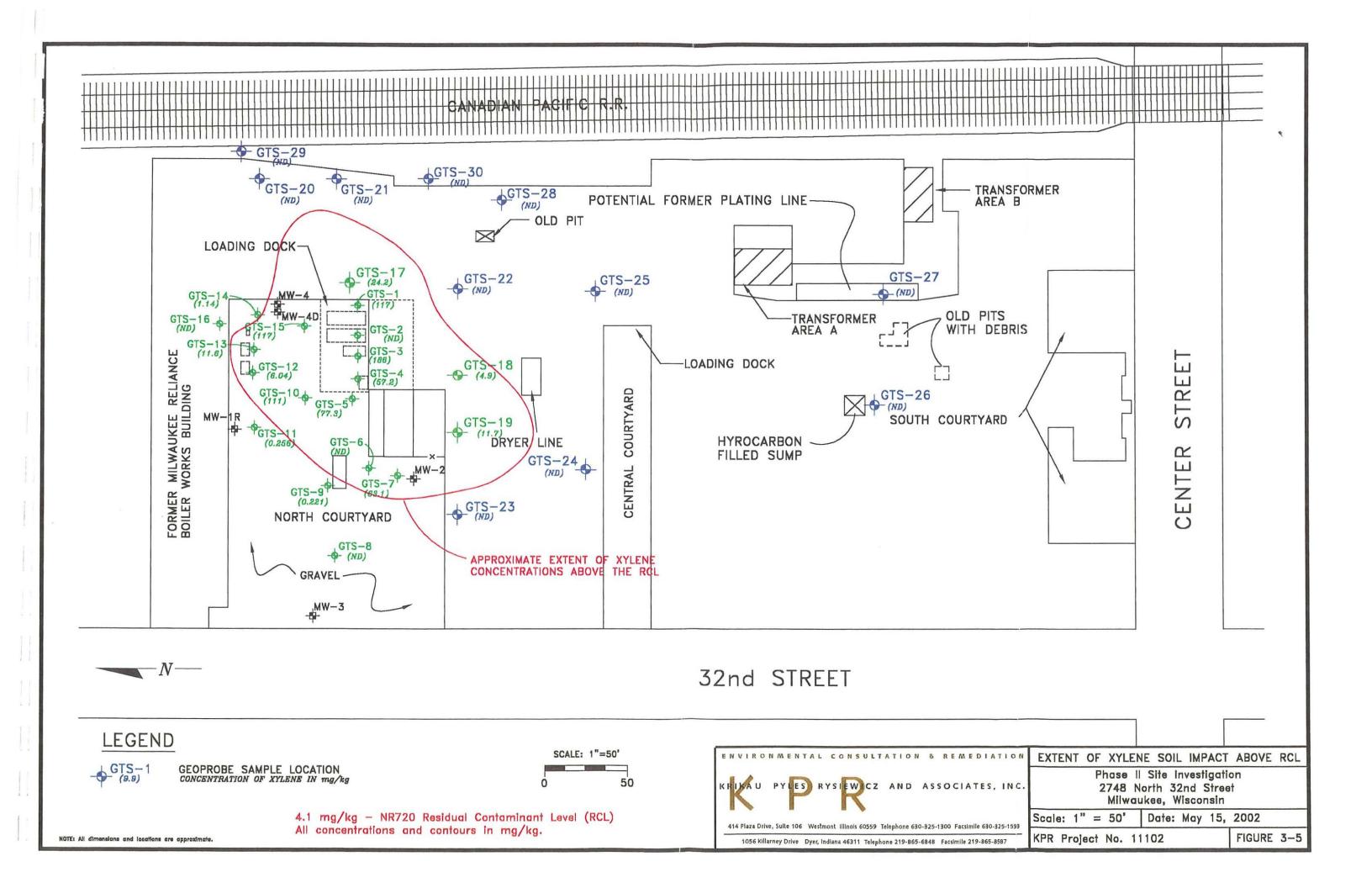
Phase II Site Investigation 2748 North 32nd Street Milwaukee, Wisconsin

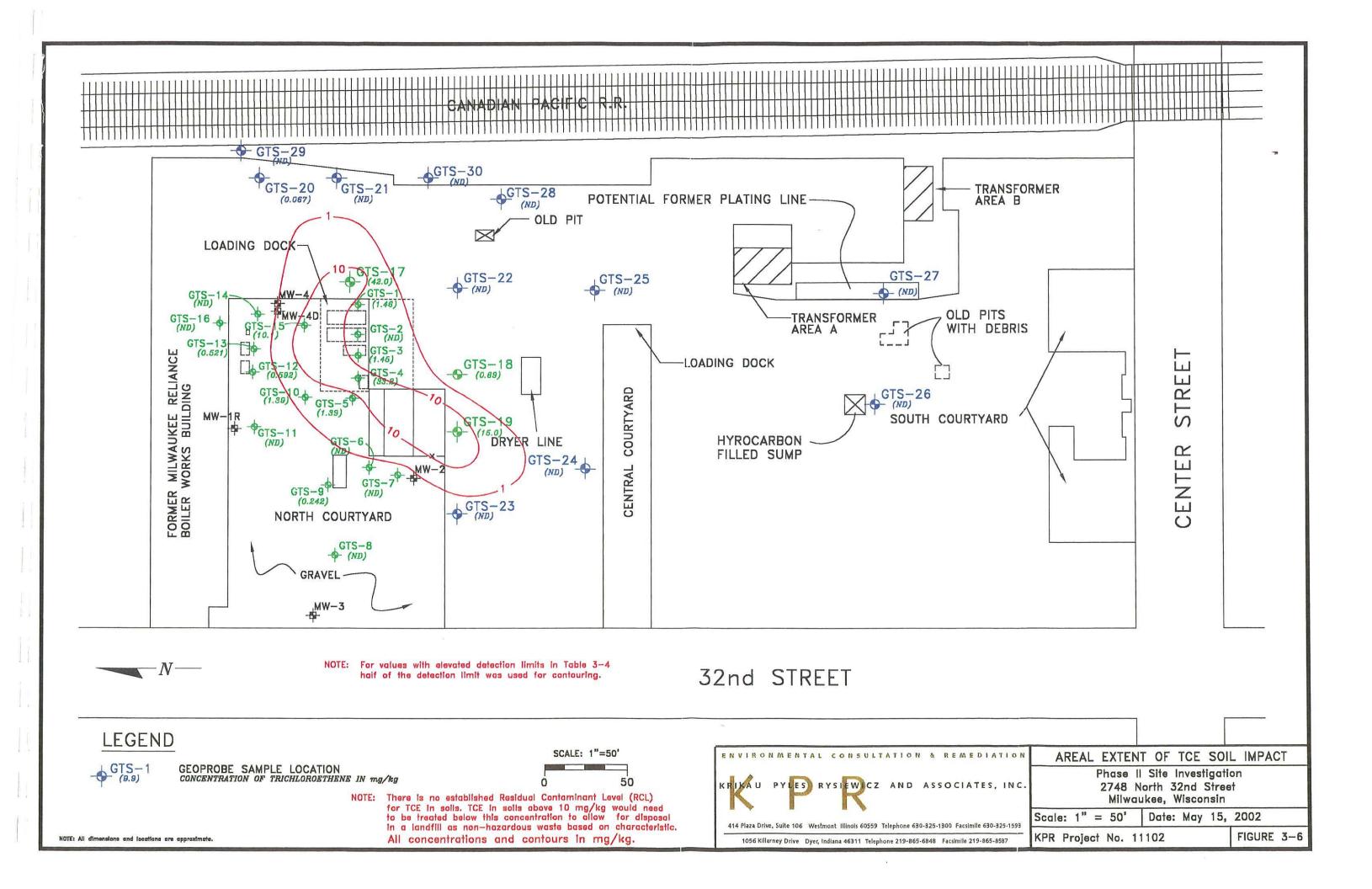
Scale: 1" = 50' Date: May 15, 2002

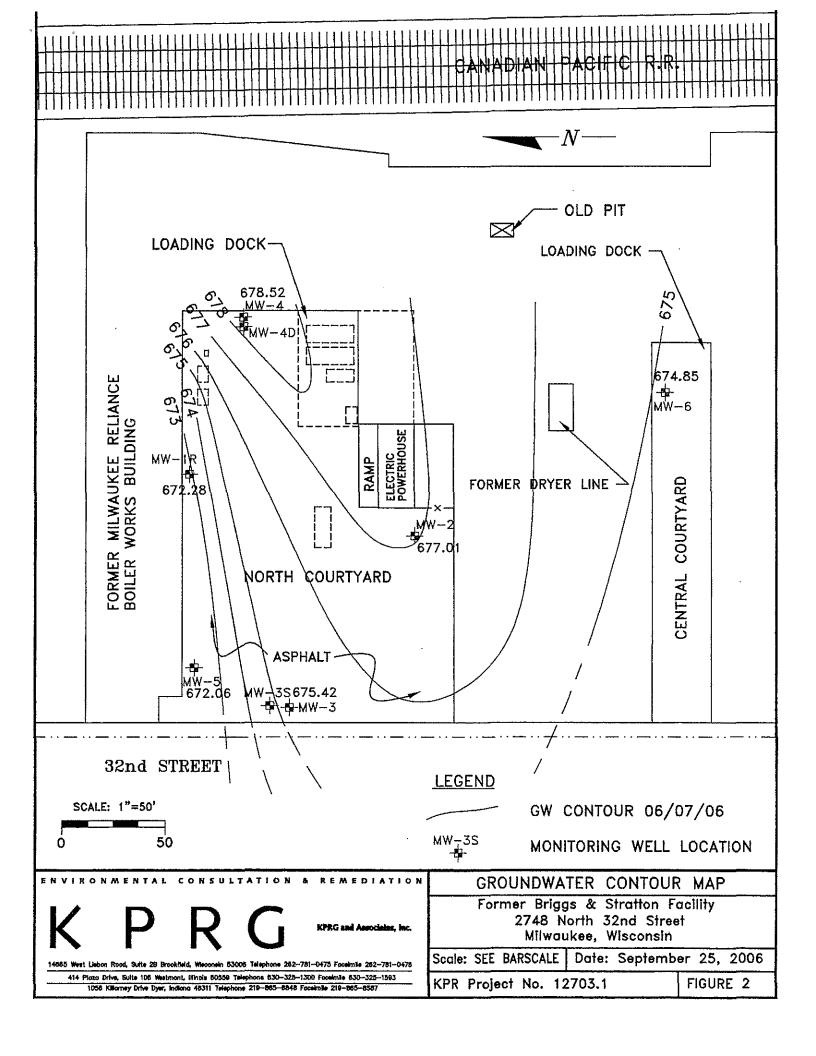
KPR Project No. 11102

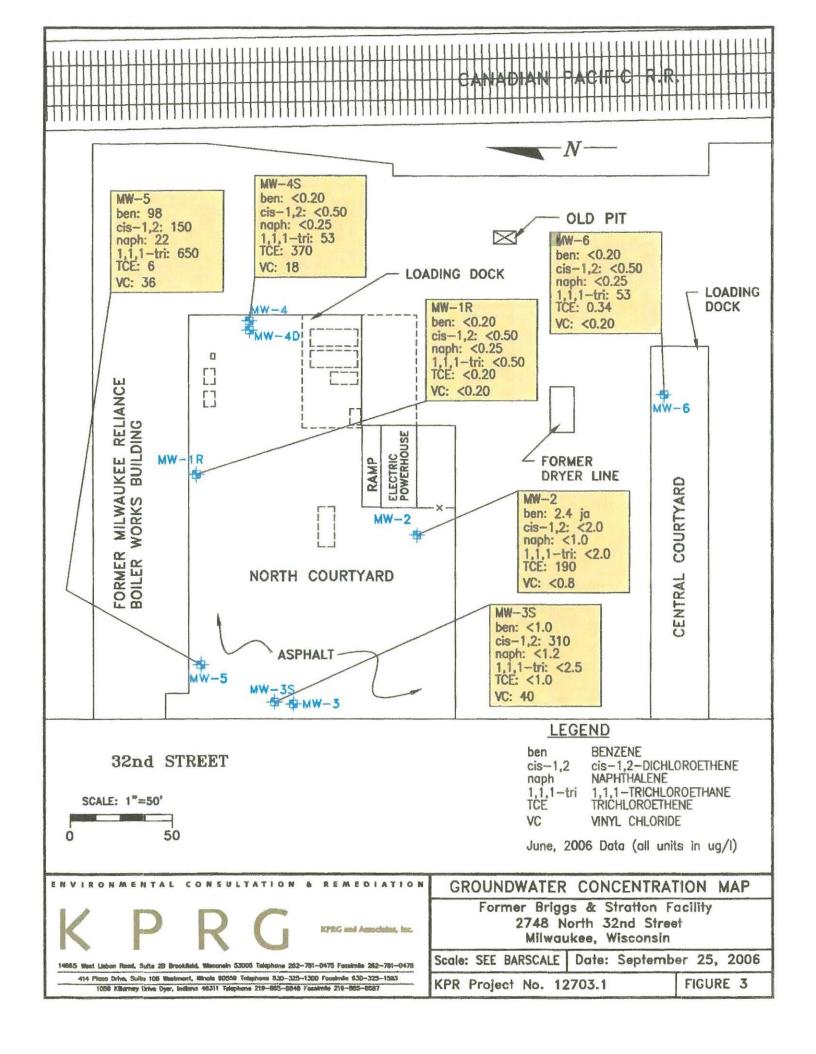
FIGURE 3-3

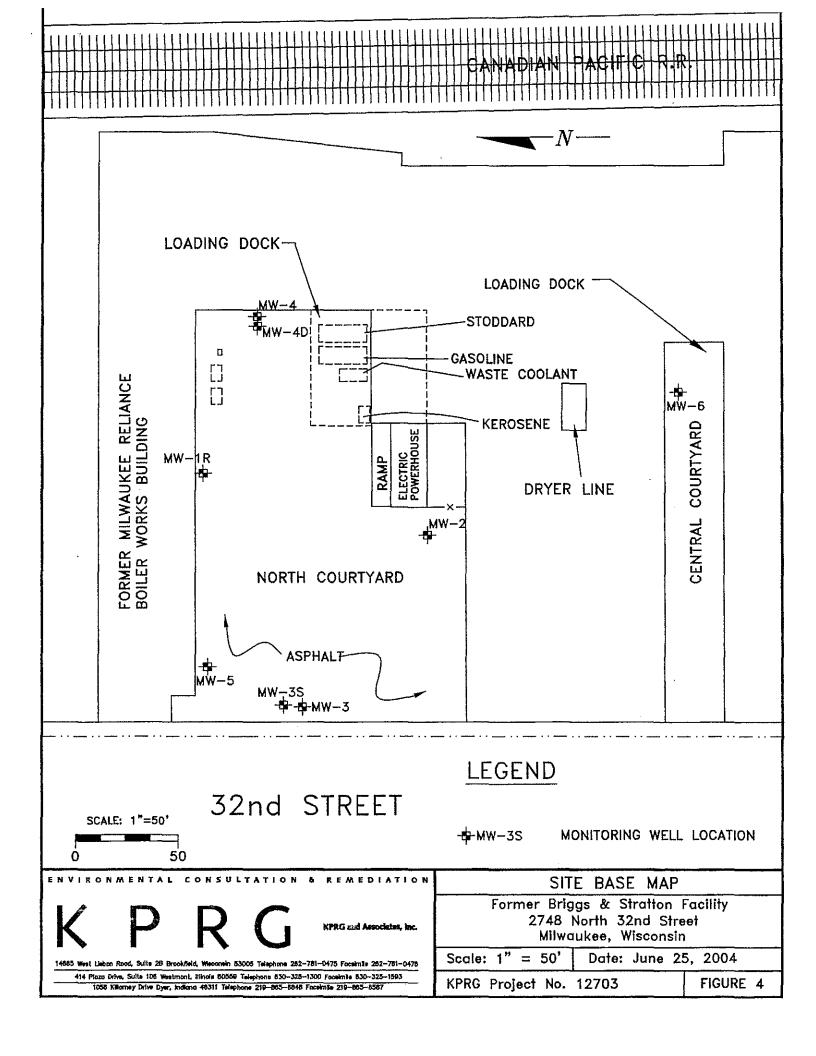


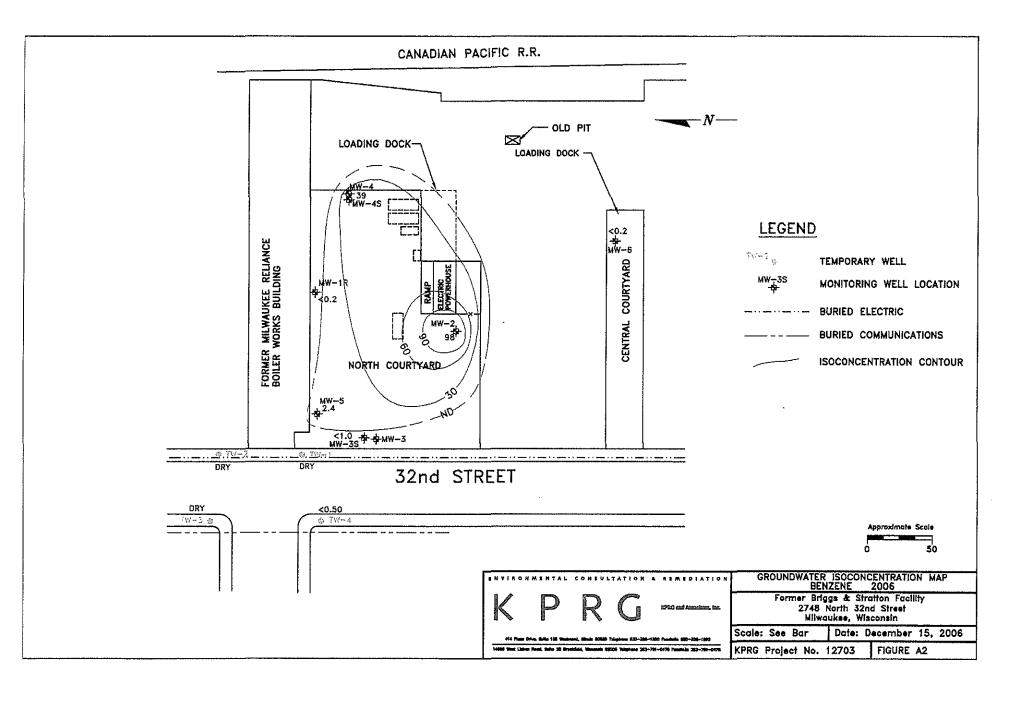


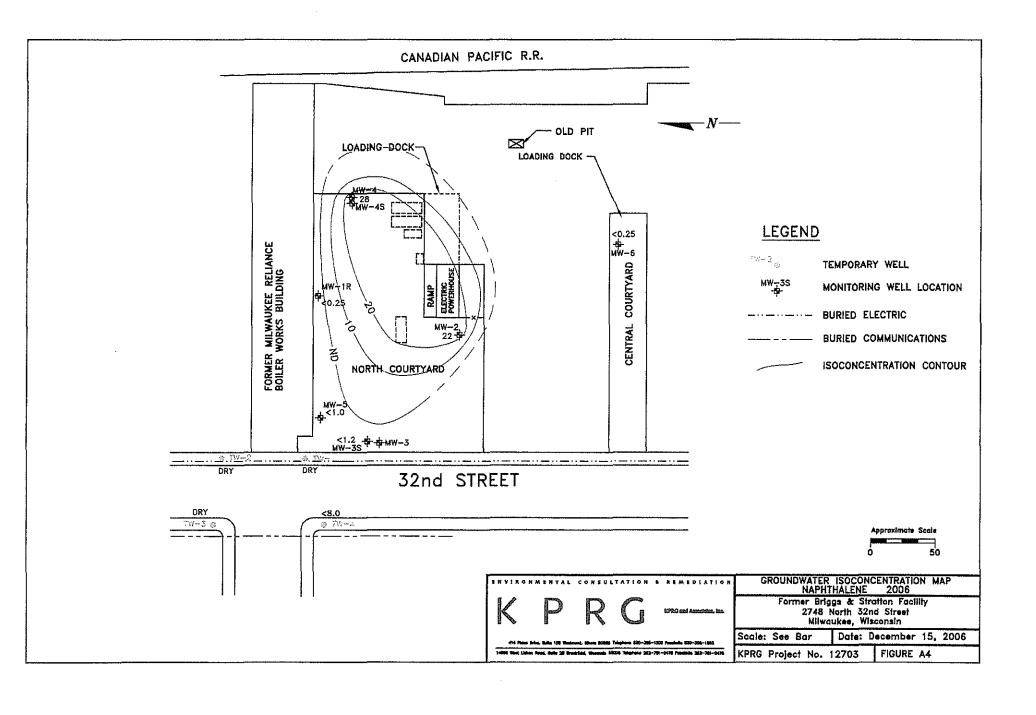








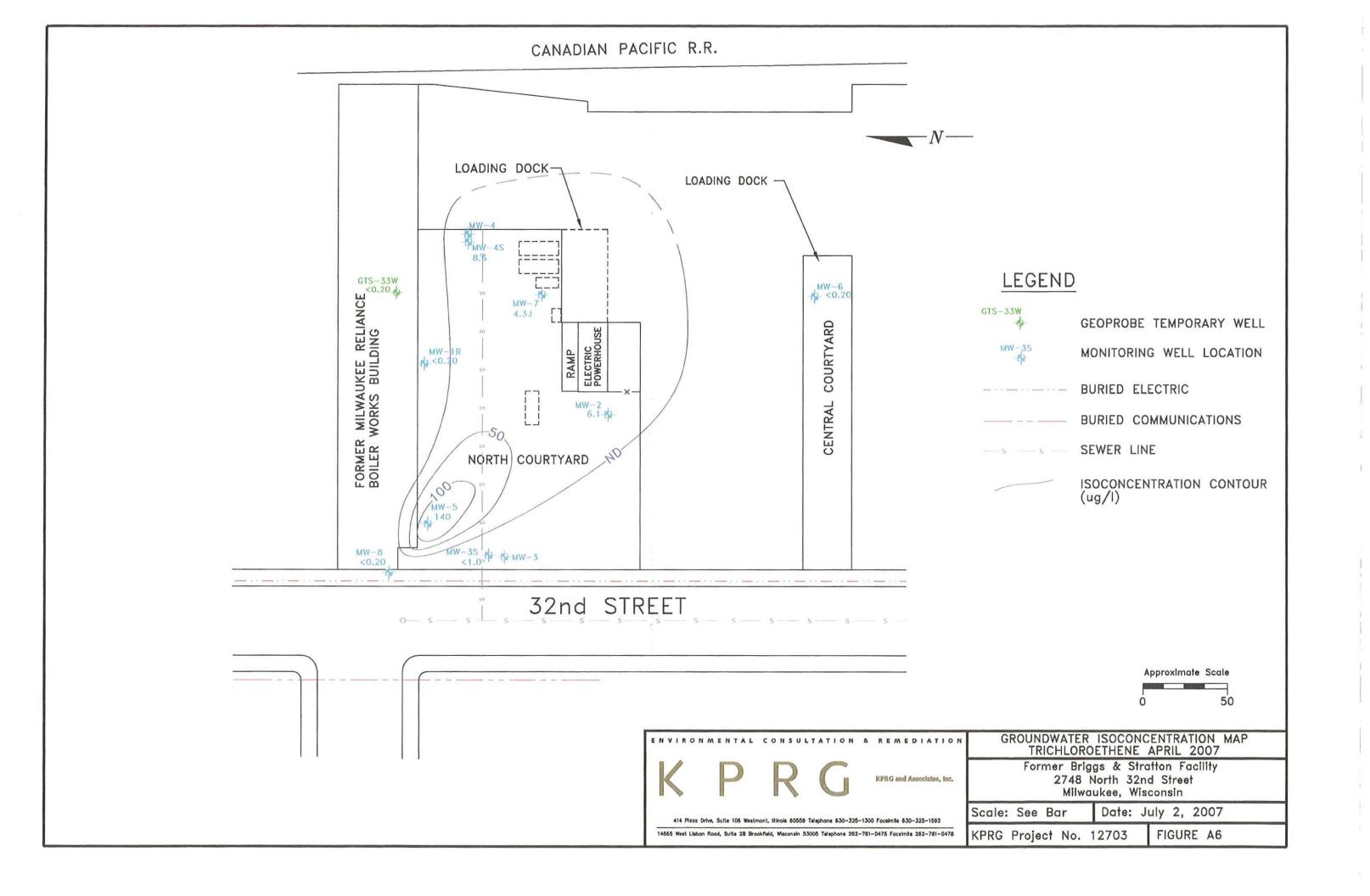


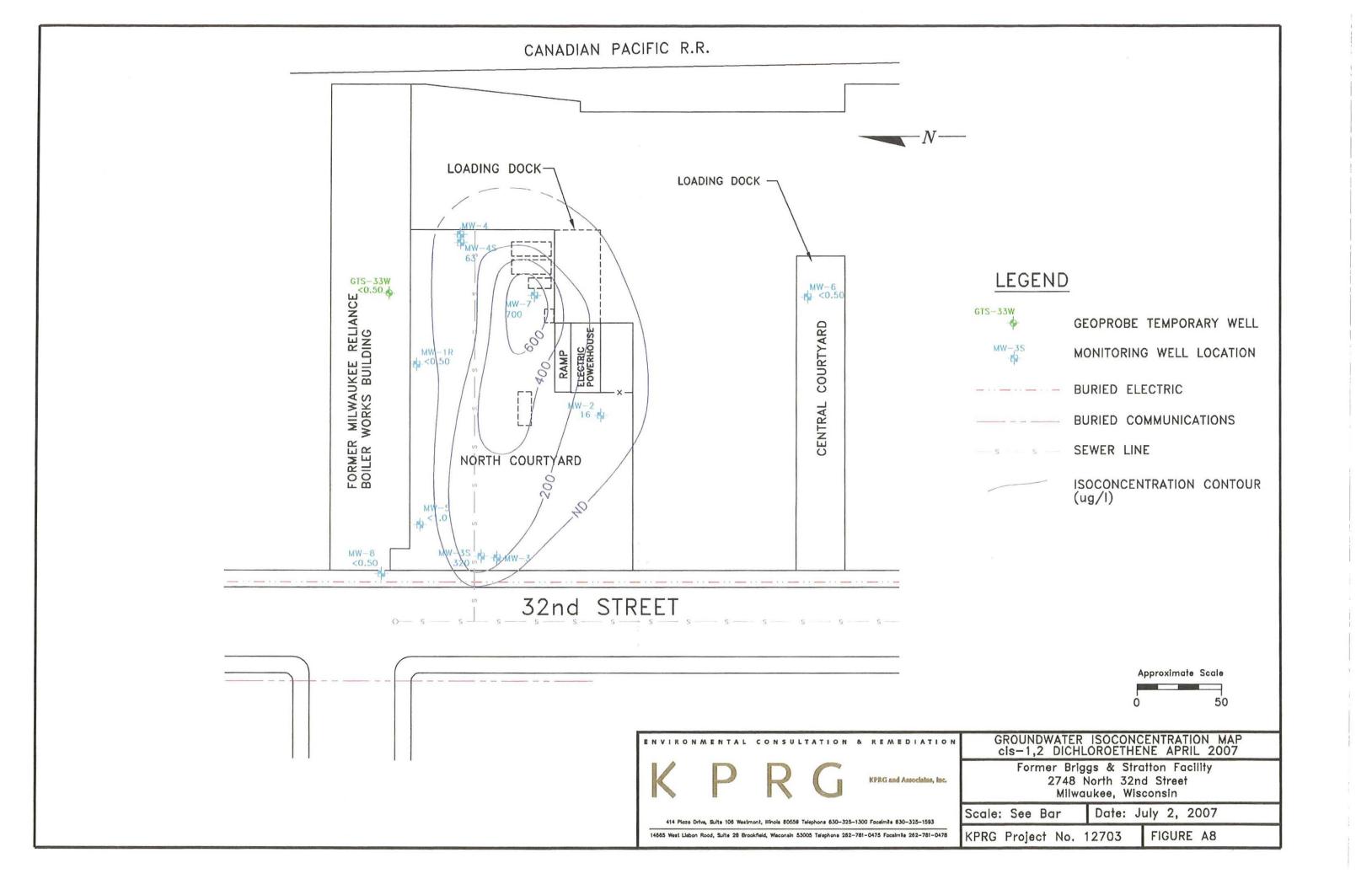


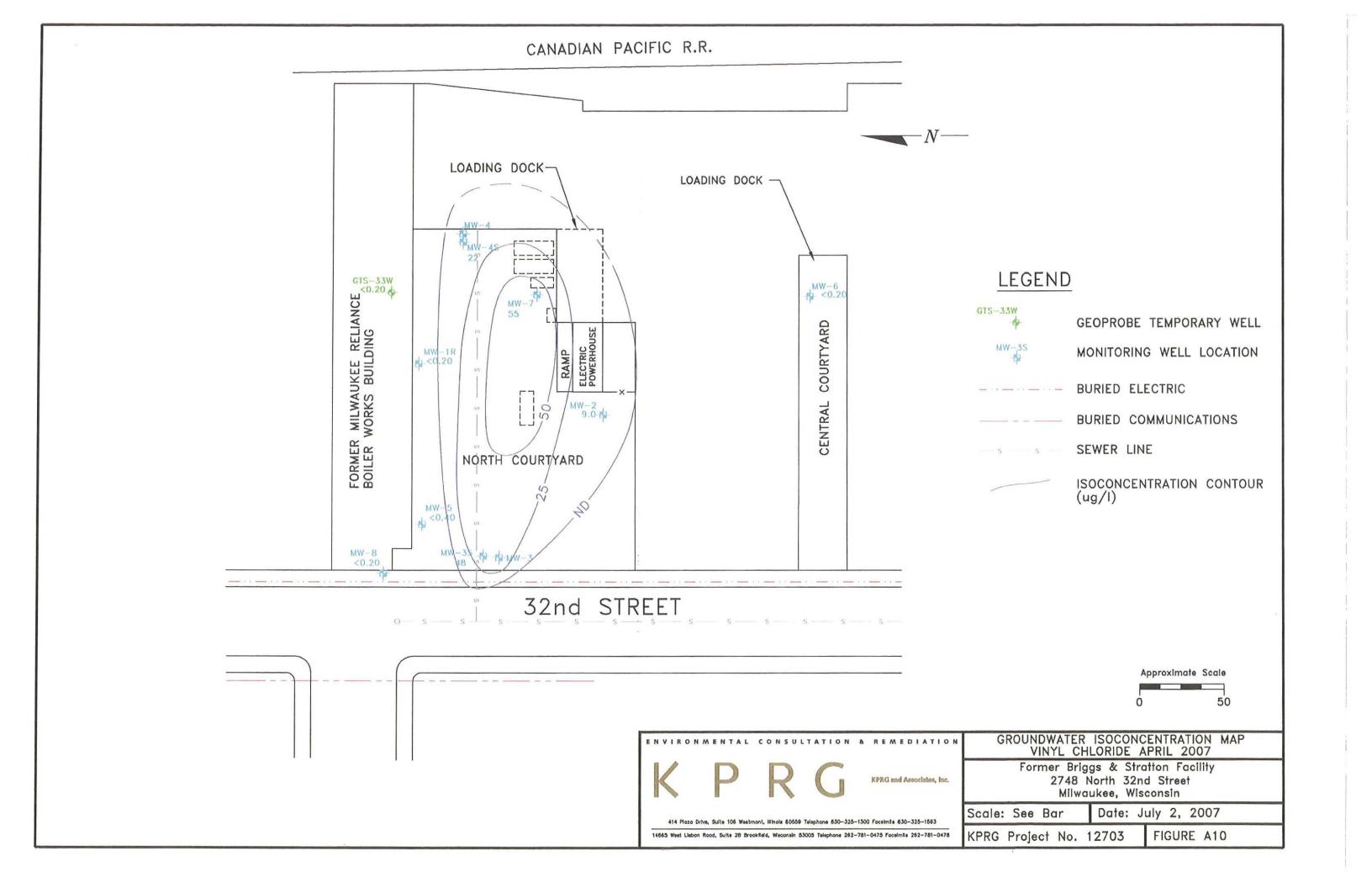
# APPENDIX C

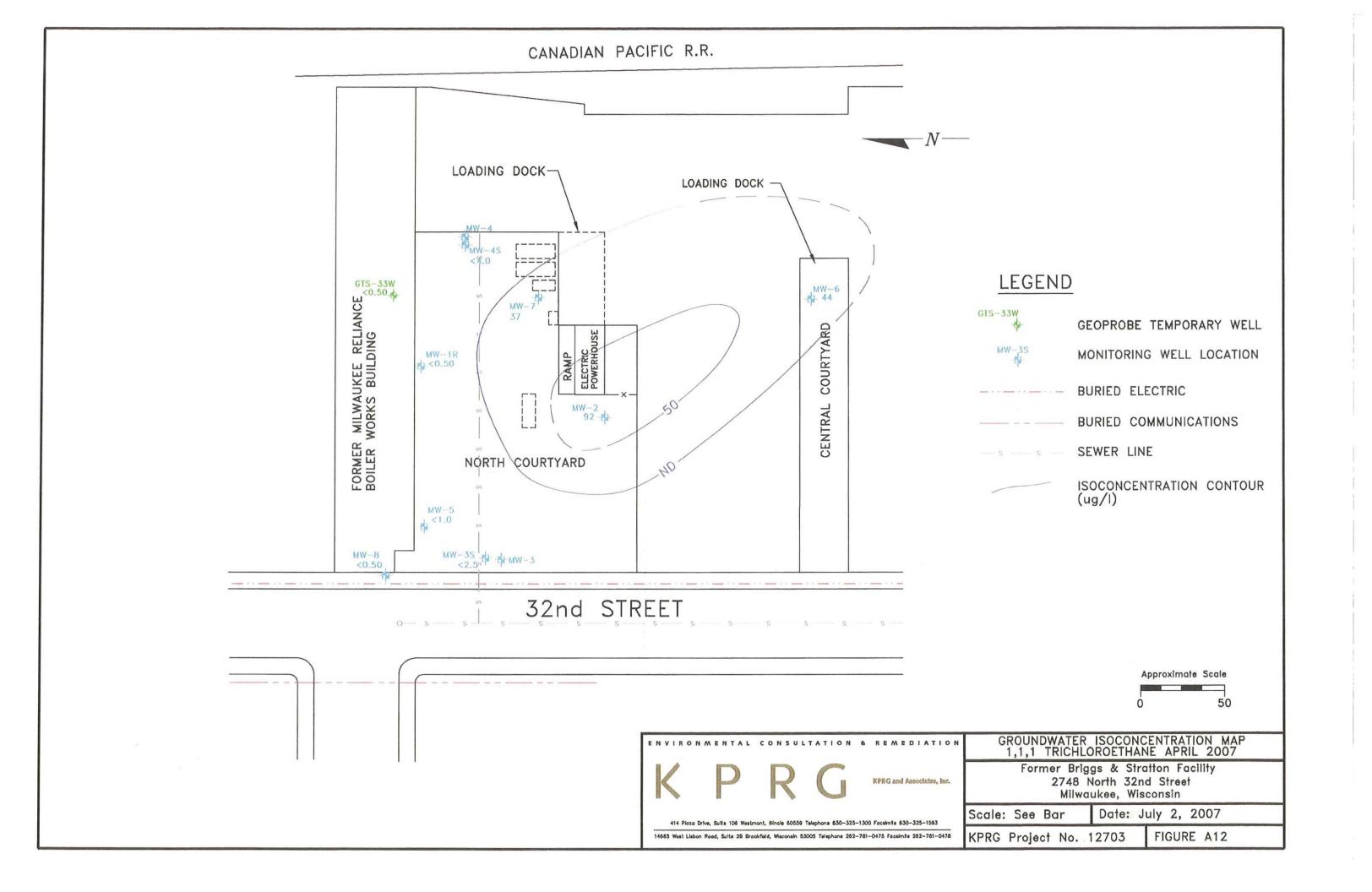
02-41-263675 Community Within the Corridor – East Block – Open ERP

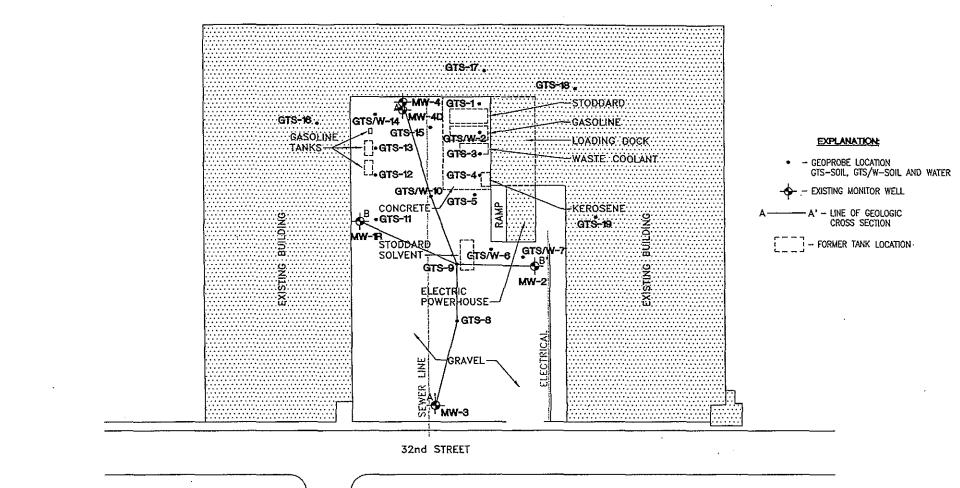


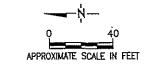










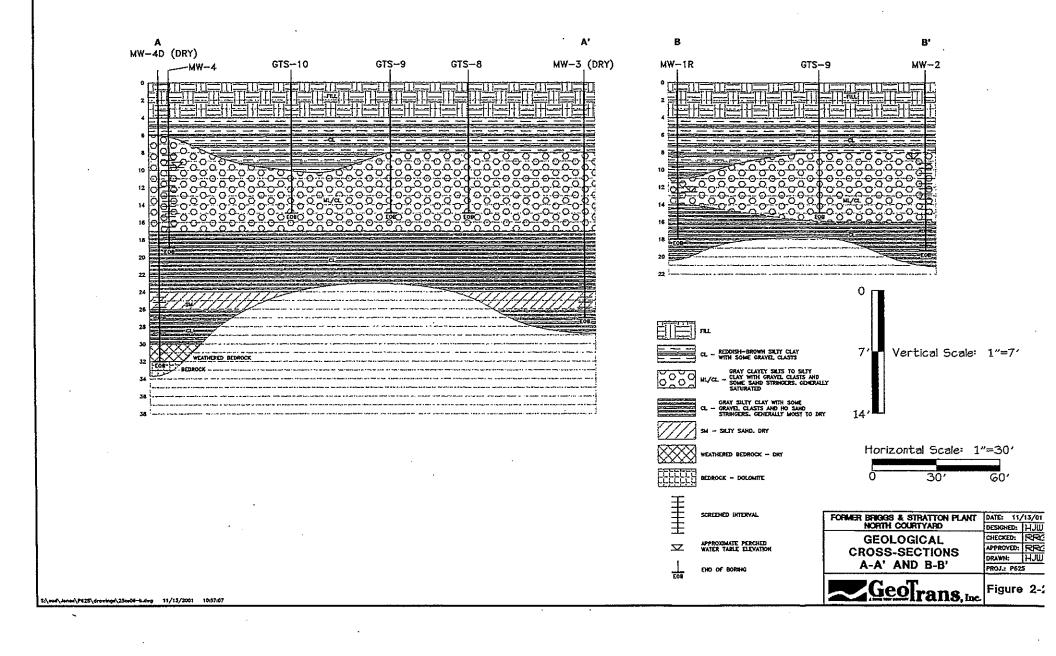


FORMER BRIGGS & STRATTON PLANT NORTH COURTYARD DATE: 11/15/01 DESIGNED: RR CHECKED: RRC SITE LAYOUT APPROVED: RRY DRAWN: HJU NORTH COURTYARD

PROJ.: P625 GeoTrans, Inc.

Figure 2-

\cad\Joses\P625\drewngs\855g0(d-b.drg 11/13/2001 11/06/3)

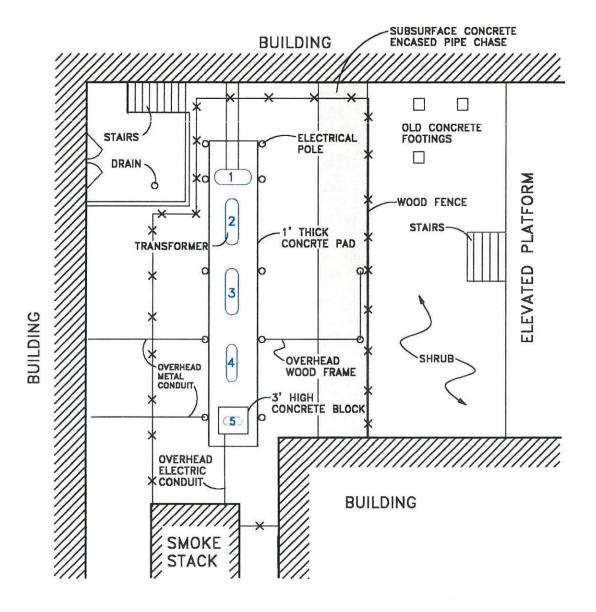


# APPENDIX D

02-41-304988 Brigs and Stratton - Closed ERP







o o		10	
SCALE:	1"=	10'	Į.

TRANSFORMER #	APPROX. CAPACITY (gal.)	
1	574	
2	574	
3	574	
4	412	
5	150	

All locations and dimensions are approximate.

ENVIRONMENTAL CONSULTATION & REMEDIATION RYSIEW CZ AND ASSOCIATES, INC.

414 Plaza Drive, Suite 106 Westmont Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

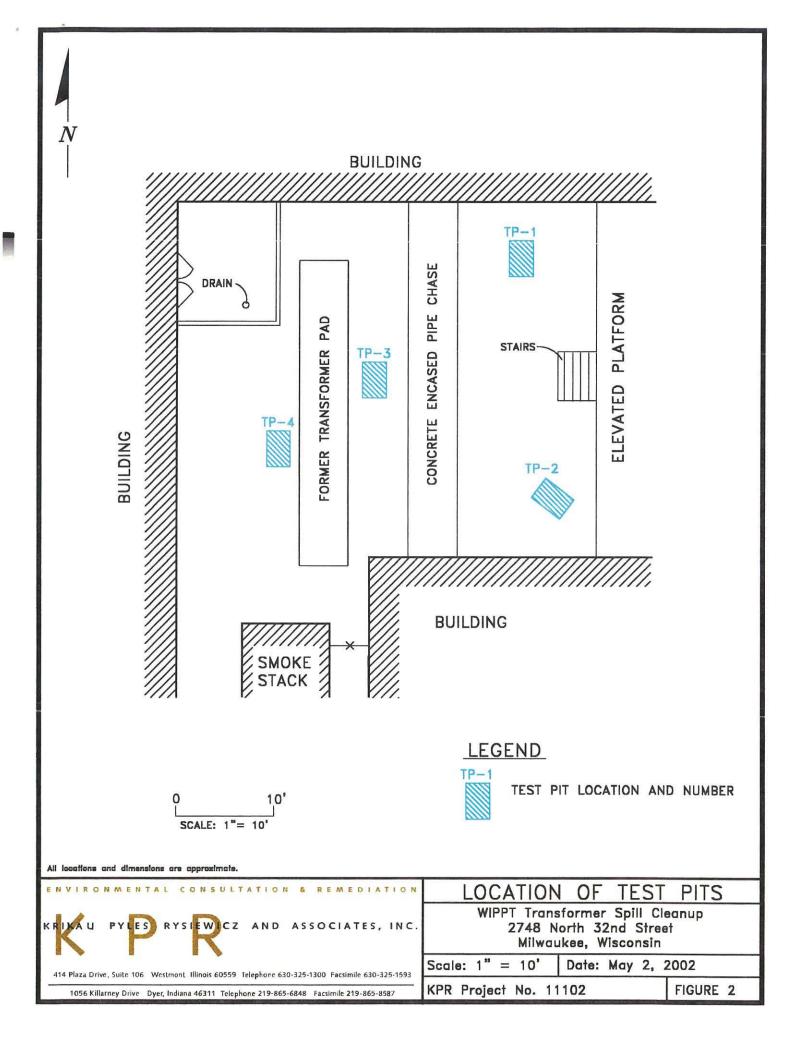
1056 Killarney Drive Dyer, Indiana 46311 Telephone 219-865-6848 Facsimile 219-865-8587

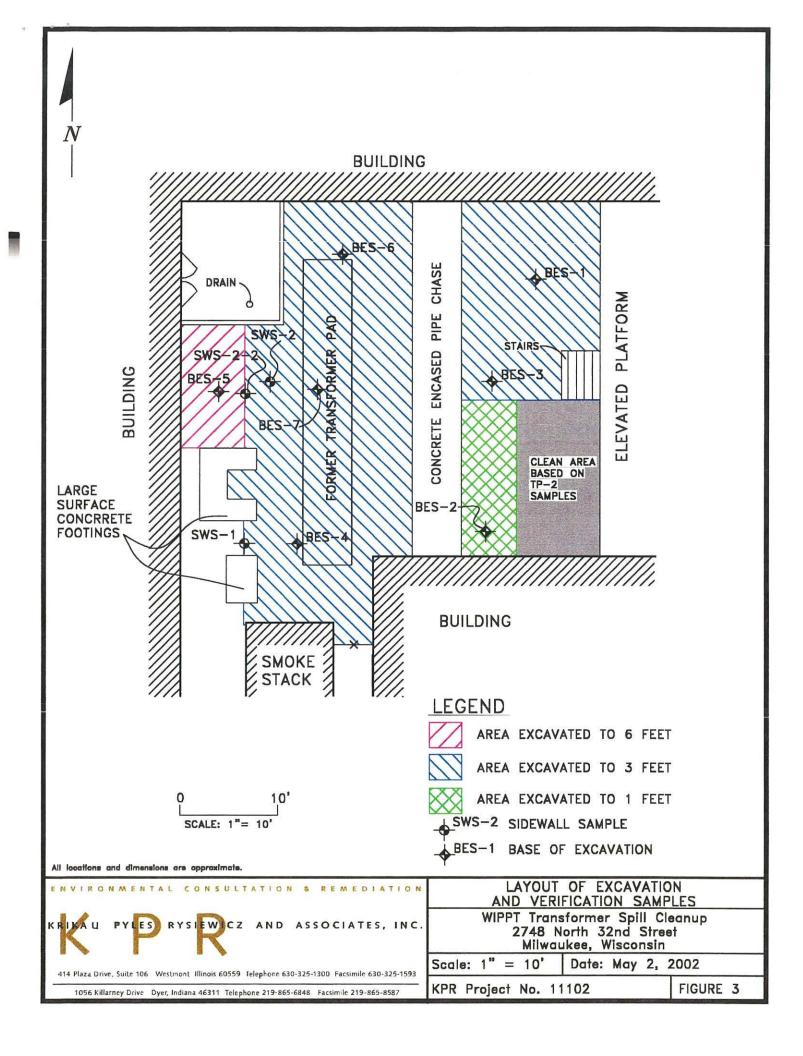
WIPPT Transformer Spill Cleanup 2748 North 32nd Street Milwaukee, Wisconsin

Scale: 1" = 10' Date: February 5, 2002

KPR Project No. 11102

FIGURE 1





# APPENDIX E

WDNR Responsible Party Letter



State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
2300 N. Dr. Martin Luther King, Jr. Drive
Milwaukee WI 53212-3128

Tony Evers, Governor Preston D. Cole, Secretary

Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



April 6, 2021

Mr. Shane LaFave (via electronic mail) Community Within the Corridor Limited Partnership 110 Cheshire Ln., Ste. 120 Minnetonka, MN 55305

Subject: Reopening of Closed Case at

Community Within the Corridor – East Block

(Former Wisconsin Industries Pension Plan & Trust)

2748 N. 32<sup>nd</sup> St., Milwaukee, WI

DNR BRRTS #02-41-263675, FID #241025400

Dear Mr. LaFave:

On August 3, 2020, the Wisconsin Department of Natural Resources (DNR) received a 'Request for Post Closure Modification' (PCM Request), submitted by K. Singh & Associates, Inc. (K Singh), on behalf of the Community Within the Corridor Limited Partnership, for the property described above. Additional sampling was conducted on the property and the results were included as part of the PCM Request. A sub-slab vapor sample detected Trichloroethylene (TCE), 1,1-Dichloroethane and 1,2,4-Trimethylbenzene at concentrations exceeding their respective vapor risk screening levels. A groundwater sample collected found Naphthalene at a significantly higher level than previously detected. A shallow soil sample collected in an area near the building not previously tested found Trichloroethylene, Benzene and Naphthalene above groundwater protection residual contaminant levels, indicating a potential additional area of vapor intrusion risk.

Community Within the Corridor Limited Partnership agreed to conduct a more extensive vapor intrusion investigation for TCE due to redeveloping the former industrial complex into residential multi-family housing. A sub-slab vapor investigation work plan was submitted and approved by the DNR. The results of the additional vapor investigation indicate chlorinated sub-slab vapors are widespread beneath the sub-slab of the building.

Additional soil investigation activities were conducted in February and March 2021. Results indicate numerous residual contaminant level exceedances on areas of the property that were previously uninvestigated. Prior investigations up until this point identified residual contamination from a previously identified chlorinated volatile organic compound (CVOC) release for which for which Wisconsin Industries Pension Plan & Trust was responsible and closed by the DNR on August 26, 2008. The DNR has determined that the newly discovered contamination poses a threat to public health, safety, welfare or the environment and meets the statutory requirements for reopening the previously closed site in accordance with Wis. Admin. Code § NR 727.13.

A response action in the form of additional soil, vapor and groundwater investigation, vapor mitigation and additional remediation is needed to address the contamination that was discovered during the recent site investigation activities. The additional site investigation, mitigation and remediation activities may occur concurrently with the proposed redevelopment construction activities provided the requirements outlined in Wis. Admin. Code chapters NR 700-754 and associated DNR technical guidance documents are followed.

The remainder of this letter describes your legal responsibilities under Wis. Stat. § 292.11 and explains what you need to do to investigate and clean up the contamination under Wis. Admin. Code chs. NR 700-754. It also provides you with information about cleanups, environmental consultants, possible financial assistance, and working cooperatively with DNR.



As the owner of the property where residual contamination is found, Community Within the Corridor Limited Partnership is responsible for restoring the environment at the above-described site under Wis. Stat. § 292.11, known as the hazardous substance spills law.

### **Legal Responsibilities:**

Your legal responsibilities are defined both in statute and in administrative codes. The hazardous substance spills law, Wis. Stat. § 292.11 (3) states:

• RESPONSIBILITY. A person who possesses or controls a hazardous substance which is discharged or who causes the discharge of a hazardous substance shall take the actions necessary to restore the environment to the extent practicable and minimize the harmful effects from the discharge to the air, lands, or waters of the state.

Wisconsin Administrative Code chapters NR 700 through NR 754 establish requirements for emergency and interim actions, public information, site investigations, design and operation of remedial action systems, and case closure. Chapter NR 708 includes provisions for immediate actions in response to limited contamination. Wis. Admin. Code chapter NR 140 establishes groundwater standards for contaminants that reach groundwater.

#### **Special Vapor Intrusion Concern with Trichloroethylene:**

Contamination that includes trichloroethylene ("TCE"), a chlorinated solvent and common degreaser, is of special concern from a human health perspective due to its potential for acute (short-term) health risks at relatively low concentrations in air. TCE is also a breakdown product of tetrachloroethylene ("PCE," also known as "Perc"), a historically common dry-cleaning chemical. Vapors can travel from contaminated soil or groundwater and along preferential pathways, such as within sewer lines, and enter occupied buildings. This is known as vapor intrusion (VI). Screening for VI must be conducted at every contaminated site in Wisconsin, as defined in Wis. Admin. Code § 716.11 (5) (a). However, when TCE is present, screening for VI should be made a priority and an interim action under Wis. Admin. Code § NR 708.11 may be necessary. For an overview on VI, see What is Vapor Intrusion? (RR-892). For more information, go to dnr.wi.gov and search "vapor." Additional technical guidance on VI is available in Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin, (RR-800).

### **General Recommendations for Responsible Parties:**

The DNR recommends that you:

1. Hire a Qualified Environmental Consultant

You have indicated that K Singh will be serving as your environmental consultant. Please inform the DNR if any consulting changes are made.

2. Properly Submit Reports on Time with Required Information Included

Wisconsin law includes timeframes for submitting technical documents and conducting work, as well as specifications for what should be included in those submittals. This letter provides a general overview of the

timeframes and first steps to take for site investigation and cleanup. For an overview of timing requirements, please refer to NR 700 Process and Timeline Overview (RR-967), enclosed.

The DNR developed the publication *Guidance for Electronic Submittals for the Remediation and Redevelopment Program* (RR-690), to assist responsible parties and consultants in properly submitting documents. Wis. Admin. Code § NR 700.11 (3g), and other specific provisions within Wis. Admin. Code ch. NR 700, outline the requirements for submittals, including electronic submittals.

3. Consider the Benefits of a Fee-based Technical Review of your Submittals

In-depth DNR review of technical reports and submittals is available for a fee. The Remediation and Redevelopment (RR) Program project managers are available throughout the process to answer general questions and provide general input as the site moves toward case closure. However, if you want a formal, written response from the DNR, a meeting with the DNR or both on a specific submittal, a review fee will be required in accordance with Wis. Admin. Code ch. NR 749. **Obtaining technical assistance from DNR project managers throughout the process is an effective way to prevent problems and delays at the end of the process when case closure is requested.** Forms, a fee schedule and further information on technical assistance is available at dnr.wi.gov by searching "brownfield fees."

#### **Required Steps to Take and Documents to Submit:**

The longer contamination is left in the environment, the farther it can spread and the more it may cost to clean up. Quick action may lessen damage to your property and neighboring properties and reduce your costs in investigating and cleaning up the contamination. The following information provides the timeframes and required steps to take. Unless otherwise approved by DNR in writing you must complete the work by the timeframes specified.

- 1. Scoping and Work Plan Submittal NR 716.07 and 716.09: K Singh conducted additional soil investigation in February and March 2021 and are recommending that a site investigation work plan be prepared to delineate the extent of soil and groundwater contamination in accordance with the requirements of NR 716. The DNR has reviewed that information and will be providing comments in a separate pending letter. Have your consultant submit the work plan for completing the site investigation according to the pending review letter. The consultant must comply with the requirements in the NR 700 rule series and should refer to DNR technical guidance documents. To facilitate prompt agency review of your reports, your consultant should use the site investigation and closure formats which are available on-line at <a href="http://dnr.wi.gov/topic/Brownfields/Professionals.html">http://dnr.wi.gov/topic/Brownfields/Professionals.html</a>.
- 2. <u>Field Investigation NR 716.11</u>: You must initiate the additional site investigation activities within 90 days of submitting the site investigation work plan. If a fee for DNR review has been submitted, the site investigation must begin within 60 days after receiving DNR comments.
- 3. Sample Results Notification Requirements NR 716.14: You must report sampling results to the DNR, owners, occupants and various other parties within 10 business days after receiving the sampling results, unless a different timeframe is approved by the DNR, in accordance with Wis. Admin. Code § NR 716.14.

- 4. <u>Site Investigation Report NR 716.15</u>: Within 60 days after completion of the field investigation and receipt of the laboratory data, you or your consultant must submit a site investigation report to the DNR.
- 5. Remedial Actions Options Report NR 722: A Remedial Action Plan was submitted to the DNR on March 23, 2021. The DNR will be providing some feedback on this proposal in a separate pending letter. Within 60 days after submitting the Site Investigation Report, you must submit a remedial actions options report (RAOR).
- 6. Remedial and Interim Action Design, Implementation, Operation, Maintenance and Monitoring Reports NR 724: Unless otherwise directed by the DNR, the responsible party shall submit all plans and reports required by Wis. Admin. Code ch. NR 724.
- 7. Notification of Residual Contamination or Continuing Obligations NR 725: In situations where notification is required, the responsible party must provide a submittal(s) that confirms that continuing obligations have been identified and affected property owners have been notified by the responsible parties 30 days prior to case closure, as required by Wis. Admin. Code ch. NR 725 and § NR 726.13 (1) (d).
- 8. <u>Semi-Annual Reporting NR 700.11</u>: Wis. Admin. Code § NR 700.11 (1) (a) requires responsible parties to submit semi-annual site progress reports to the DNR until case closure is granted. The reports summarize the work completed over six months and additional work planned to adequately complete the response action at the site. Consultants may submit these reports on behalf of responsible parties. These reports are due in January and July of each year. Please refer to DNR publication *NR 700 Semi-Annual Site Progress Report* (RR-082), for more information.

#### **Additional Information:**

Sites where discharges to the environment have been reported are entered into the Bureau for Remediation and Redevelopment Tracking System (BRRTS), a version of which appears on the DNR's Internet site (BRRTS on the Web). You may view the information related to your site at any time (<a href="http://dnr.wi.gov/topic/Brownfields/wrrd.html">http://dnr.wi.gov/topic/Brownfields/wrrd.html</a>) and use the feedback system to alert us to any errors in the data.

If you want a formal response from the agency on a specific submittal, please be aware that a review fee is required in accordance with Wis. Admin. Code ch. NR 749. If a fee is not submitted with your reports, you should proceed under the advice of your consultant to complete the site investigation to maintain your compliance with the spills law and chapters NR 700 through NR 754. **The timeframes specified above are required by rule; do not delay the investigation of your site.** We have provided detailed technical guidance to environmental consultants. Your consultant is expected to know our technical procedures and administrative rules and should be able to answer your questions on meeting cleanup requirements.

All correspondence regarding this site should be sent to:

Attn: Environmental Program Associate Remediation and Redevelopment Program Wisconsin Department of Natural Resources 2300 N. Dr. Martin Luther King Jr. Dr. Milwaukee, WI 53212 Unless otherwise directed, submit one paper copy and one electronic copy of plans and reports. To speed processing, correspondence should reference the BRRTS and FID numbers shown at the top of this letter. Electronic submittals required under the NR 700 rule series should be sent to the DNR using the RR Program Submittal Portal at dnr.wi.gov, search "RR submittal portal"

(https://dnr.wi.gov/topic/Brownfields/Submittal.html). Questions on using this portal can be directed to the contact below or to the environmental program associate (EPA) for the regional DNR office. Visit dnr.wi.gov, search "RR contacts" and select the EPA tab (https://dnr.wi.gov/topic/Brownfields/Contact.html).

We encourage you to visit our website at <a href="http://dnr.wi.gov/topic/Brownfields/">http://dnr.wi.gov/topic/Brownfields/</a>, where you can find information on selecting a consultant, financial assistance and understanding the cleanup process. You will also find information about liability clarification letters, post-cleanup liability and more.

If you have questions, call the DNR Project Manager Jane Pfeiffer, at (414) 435-8021 for more information or visit the RR Web site at the address above. We will also be able to answer questions at our meeting this coming Friday.

Thank you for your cooperation.

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Sincerely,

Pamela A. Mylotta

Team Supervisor, Southeast Region Remediation & Redevelopment Program

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